An Address
ON
LEGISLATION AS A REMEDY FOR MEDICAL GRIEVANCES.

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MR. CHAIRMAN AND GENTLEMEN,—I trust that my volunteered appearance before you to-night as the reader of a paper on "Legislation as a Remedy for Medical Grievances" will not be regarded as presumptuous. I need not hesitate to say that my offer of the paper was called forth by one which was read to you on Dec. 8th last by Mr. Victor Horsley, and which, when I came to read such parts of it as have been published, appeared to me to call for refutation in relation to public questions, however it might be treated in relation to personalities, to which it is not my present intention to refer. As long as Mr. Horsley refrains from praising me, my equanimity is not likely to be disturbed by anything else that he can do. It will be necessary for me to mention him as the exponent of certain opinions, and also possibly with regard to his methods of stating and maintaining them, but, as far as I can foresee, in no other manner. My object will be to project his personality into space, and to leave it in that cold and unexplored region undisturbed. On the very threshold of my enterprise you are entitled, I think, to ask for my credentials. I am, I fear, a stranger to many of you, and you may justly seek to know on what basis of knowledge I venture to dispute statements which have been made by a person of Mr. Horsley's undoubted attainments in other directions. Well, the questions which we have to consider have reference for the most part to grievances or difficulties which beset the paths of general practitioners, and I was engaged in general practice long before Mr. Horsley was born. I continued to be engaged in it for many more years than he has been in the profession, and have had large practical experience of nearly all its forms and phases. When I relinquished it, now nearly thirty years ago, I soon, as surgeon to the Eye Department of St. George's Hospital, began to come into friendly relations, both personally and by correspondence, with general practitioners in all parts of the country, and these relations have ever since been maintained. In the early "fifties," when medical legislation was already in the air, although it was for a time laid aside in consequence of the Crimean War, I was associated in practice with the late Sir John Rose Cormack, the then editor of what is now called the *British Medical Journal*, and was a frequent leader writer in its columns, so that I not only had opportunities of looking behind the scenes of medical politics, but was compelled as a matter of duty to give attention to medico-political questions. On returning from the Crimea I renewed some of my journalistic intimacies and journalistic work, and became well acquainted with the history of the Act of 1858, with the provisions which medical reformers sought to obtain, and with the concessions which politicians were prepared to grant. Ten years later I became, and for several years remained, a constant leader writer on the staff of THE LANCET, and in 1887 I was appointed by the Society of Apothecaries to be its representative on the General Medical Council. With what I may call the inner history of the Act of 1886 I was as familiar as with that of 1858, from the accident that the Minister in charge of it was the late Mr. Mundella, whom I had known for many years, and who afforded me the privilege of discussing with him many of its provisions. I have at least enjoyed opportunities of becoming thoroughly acquainted, both practically and theoretically, with the subjects on which I desire to speak. Whether I have used these opportunities rightly it will be for you, when you have heard me, to decide.

I presume it will be generally conceded that the members of every calling or profession, in this imperfect state of existence, find something in the state of their relations with the public or with their more especial *clientèle* which might be amended with advantage; and it will also be conceded that as the wearer of the shoe knows best where it pinches, so the members of every profession are naturally more alive to their own grievances, and to the nature and extent of the evils which these grievances produce, than they are to the grievances of other people. In these circumstances I am disposed to look upon a consciousness of grievance on the part of the members of any profession somewhat as a sign of healthy vitality, and I should feel doubt as to the future of any society in which grievances and a determination to remove them did not exist. But the present grievances of the medical profession, in my humble judgment, much transcend what I may describe as the normal standard, and are becoming year by year more and more oppressive. If they do not arise from, they are at least intensified by, the fact that the members of the profession of late years have been increasing in number with a rapidity previously unexampled, while at the same time the demand for their services has in many directions been diminishing. At the election of Direct Representatives to the General Medical Council in 1886, 18,074 voting papers were required for England and Wales; at the election in 1891, 19,585; and at the election in 1896, 22,577. At the census of 1891, according to a return recently issued from the General Registry Office, there were in England and Wales, including physicians, surgeons, and general practitioners, 18,936 medical men. Since the census of 1881 the number had increased by 25 per cent., as compared with less than 3 per cent., which had been the rate of increase between 1871 and 1881. During the same period the general result of increased knowledge has been greatly to diminish the amount of occurring illness, and in many instances greatly to abbreviate the duration of the illnesses which occur. It is hardly worth while to dwell upon what must be familiar to all who hear me; but, just to take a single illustration, a woman with ovarian tumour would have been likely a comparatively short time ago to sink into the grave after some four or five years of lingering sickness, during which she would have been constantly dependent upon the ministrations of a general practitioner for the relief of suffering. At the present day, as soon as her condition is ascertained, she undergoes an operation and in a month is restored to health. Her gratitude, such as it is, goes out rather to the surgeon who operated upon her than to the general practitioner who first discovered the nature of her disease, and he who a few years since would have been indispensable to her, and would have derived an equivalent remuneration from her case, now obtains neither much credit nor much money. So far at least it is mainly the general practitioner who suffers, but in the meanwhile the operating surgeons have greatly increased in number, and they, too, unless I am misinformed, are feeling to the full extent the pinch of competition, and are compelled to operate for fees which not long ago would have been regarded as totally inadequate. I have lately seen it stated, I am not sure on what authority, that there are at this time 14,000 general practitioners in England and Wales. If this be all there must be more than 8000 physicians—surgeons in the strict sense—and specialists. Can we wonder that many of all classes find it difficult to keep the wolf from the door, or that a few should stoop to practices which they can only excuse even to themselves by saying "my poverty and not my will consents"? It is melancholy to add, on the authority of the Registrar-General, that "the tendency to the commission of suicide among medical men has notably increased." I think it will be seen that I have not the slightest inclination either to minimise or to explain away the evils under which the members of the medical profession are suffering, but the real questions which press for solution are—first, How are these evils brought about? and secondly, How may they be remedied?

A great many causes lie upon the surface and are obvious to the most superficial observer. Some of them, such as the abuse of medical aid societies and of hospitals, arise within our own ranks and are the not unnatural results of excessive competition, while others depend upon the competition of persons outside our ranks, upon quackery in all its forms. The illegal medical practice of unqualified persons other than druggists is not, in my judgment, the most important factor; but the so called 'counter-practice" of druggists is

a very considerable one, and is only second, if indeed it be second, to the sale of "patent" medicines, on which I have somewhere read the population of England and Wales expend not less than three millions sterling every year. If we are to consider how the abuse of societies and of hospitals, the counter-practice of druggists, the sale of patent medicines, and the practice of unqualified persons may be diminished or controlled, the very first aspect of these questions is, as it appears to me, Shall we trust in an invocation of Hercules, as represented by the law, or shall we put our own shoulders to the wheel? It is among the complaints made against the General Medical Council, that it has not hitherto set the law in action with sufficient frequency or with sufficient promptitude, and to this part of the subject I shall have to return by-and-by.

In the meanwhile, however, I may say that the supposed existence of grievances against the General Medical Council was unknown to me until I saw the reports of a meeting of the British Medical Association held, if I am not mistaken, at Carlisle. The reports were abbreviated, but I was privately told that three speakers, Dr. Lovell Drage, Mr. Victor Horsley, and Dr. Welsford, all signalised themselves by the energy of their attacks upon the Council, and that Mr. Horsley assailed the action of the President (Sir Richard Quain), in a manner which induced decent people to leave the room rather than remain to listen to him. What he said I do not know, because the two leading medical journals of London, both of which received a full report, both decided that this portion of the speech was unprintable; but from what I have heard I am inclined to believe that if they had printed it the good sense and the good feeling of the profession would have been too much outraged to permit of Mr. Horsley's return as a Direct Representative. As it befell, the outbreak was in great measure confined to the meeting-room and to the portion of the audience which remained there, but enough escaped to make some impression upon the external atmosphere, and I, as having been for ten years a humble member of the Council, wrote a letter to THE LANCET to defend my colleagues and myself against imputations which appeared to me to be destitute of foundation. Of the manner in which my letter was received by persons whose only conception of argument is abuse you are as well informed as I am. The ideas generally entertained in the profession of the General Medical Council and of its functions have been a good deal obscured, even from the period at which the Council was first instituted, by a quantity of fine writing which has not been guided by knowledge. The Council has been described as "the medical Parliament," in forgetfulness of the fact that while Parliament is a legislative the Council is only an administrative body, and that its powers of administration are strictly defined and limited by the Act which brought it into existence. Even lately I have seen it called "the ruling or the governing body of the profession," although it has scarcely more to do with ruling or with governing the profession than with ruling or governing the courses of the stars. These and other illustrations of what South called "the terrible imposture and force of words" have been responsible for many errors; and I shall perhaps best dispel them by passing from negatives to positives, and by attempting a plain and common-sense sketch of what the Council really is and of the purposes for which it was created. It is not, as has been too often erroneously believed, a body created for the purpose of watching over the interests of the medical profession, but it is a body created for the protection of the public, and charged to see, first, that no obviously incompetent person is permitted to become a registered medical practitioner; and, secondly, that no conspicuously unworthy person, when once his unworthiness is proved, shall be permitted to retain the status which registration confers.

The Medical Act of 1858 was not primarily a measure of medical reform at all. Its aim was primarily political, and was to place the three divisions of the kingdom upon a footing of equality as far as medical qualifications were concerned, so that the diploma granted in any division should be valid in the other two. It was urged in the profession that the privileges thus conferred upon Scottish and Irish licensing bodies should be fenced round by restrictions calculated to prevent any competitive lowering of the standards of examination, and it was to provide and maintain these restrictions that the General Medical Council was established. Its chief function, briefly stated, was to see that every examination by which a man could be placed upon the Medical Register was of a sufficiently searching character to afford reasonable security for the safety of the public, and that every such examination should be kept as nearly as possible at the same standard in whatever division of the kingdom it might be conducted. It would have been possible, perhaps, to secure the desired result by a Council which was independent of the examining bodies, and even to confer upon such an independent Council the power of disallowing any examination which fell short of its requirements. But this was not the course pursued by the Legislature, which preferred, wisely, as I think, to work with the materials at its command and to conciliate the licensing bodies rather than to offend them. The Council was composed of seventeen representatives chosen by the nineteen licensing bodies, the Universities of Aberdeen sharing their representative with the University of Edinburgh and the University of Glasgow sharing its representative with the University of St. Andrews. Six members, not necessarily medical men, although they have always been so, were nominated by the Crown; and the Council of twenty-three thus constituted was empowered to elect its president from outside its ranks. The Council was therefore composed, as far as its great majority was concerned, of the representatives or the licensing corporations, and these gentlemen were expected to arrive at agreement with regard to the standards of examination which were practicable and expedient, and to carry their agreement into action. No power of disallowing any examination was vested in them, but only a power of reporting "insufficiency" to the Privy Council, which then became sole judge of the course which should be pursued and was able to disallow or to confirm the impugned examination as it might see fit. All the Council could do in order to raise the standard of examination was to make "recommendations" to examining bodies, either collectively or individually; and, as was no doubt foreseen or expected by Parliament, these recommendations, being made with the sanction and consent of the representatives of the licensing bodies affected by them, have very generally been adopted. This, then, was and is the chief business of the Council—namely, to see that no man obtains entrance to the Register as a legally qualified medical practitioner until he has passed an examination of a sufficiently high standard to afford reasonable security to any sick person who may have occasion to seek his advice. It is hardly necessary to point out that, so far at least, the duties of the Council are absolutely and solely for the protection of the public and in no degree for the protection of the medical profession.

The next aim of the Legislature, still with a view to the protection of the public, was to make provision for divesting of his medical character any practitioner who had been proved to be unfit to retain it. It was felt that a man who had been convicted of dishonesty in some other relation of life was likely to be dishonest as a medical man, and to abuse his professional opportunities for the sake of gain; and it was also felt that a man might be guilty of conduct in the exercise of his profession which, although not bringing him within the meshes of the criminal law, might yet afford abundant evidence that he was not worthy of trust. The Council, being in charge of the door of entrance to the Register, was naturally entrusted with the door of exit also, and was empowered to erase the name of any person convicted of crime or misdemeanour or who, on inquiry by the Council itself, was adjudged to have been guilty of "infamous conduct in any professional respect." I believe the intention of the Legislature in adopting this somewhat vague phrase was that it should be understood to apply only to misconduct of a very grave character, committed in the course of professional relations with a patient or patients, and I infer this mainly from the severity of the only penalty which the Council was empowered to inflict. If the phrase had been intended to apply to comparatively trivial misconduct I think a power of suspension, of erasure for a limited time, or of restoration under certain conditions, would have been given by the Act. It seems certain that such discretionary powers would have been given if there had been any intention on the part of the Legislature to create a body which should exercise a sort of disciplinary control over the general conduct of the profession, such, for example, as is exercised by the Royal College of Physicians of London over its Fellows and Members. The difficulties hence arising

have been deeply felt by the Council, and have caused us, although without any statutory authority, to restore to the Register after a period names which had been erased for offences which did not seem to us to call for the infliction of a life-long penalty. I hope that whenever a new Medical Act is carried the position of the Council will be improved in this respect, and that definite powers of suspension or of the infliction of time sentences will be conferred upon it.

I hope I have succeeded in demonstrating that, so far as the main objects of its existence are concerned, the Council is not so much a medical body charged with duties towards the medical profession, as a sort of outlying or irregular department of the Privy Council, charged with the duty of securing that registered medical practitioners shall not only be persons of sufficient skill and knowledge in their calling, but also persons of moral worth and respectability. Both these conditions are to be secured in the interests and for the safety of the public, and on these grounds alone. The duty of compiling a national or imperial pharmacopœia to supersede the three which were formerly current in the three divisions of the kingdom is a subsidiary one, and is a natural corollary of the unification of the divisions in respect of medical licences. So far as this, gentlemen, there can be no dispute; but we now reach the confines of a profound difference of opinion.

The preamble of the Act of 1858 declared it to be expedient that persons requiring medical aid should be able to distinguish qualified from unqualified practitioners, and the Act established registration as a test for the satisfaction of this expediency. In order to render the test more sure it provided by Clause 40 that any person who was not registered, but who "wilfully and falsely" used any designation by which registration was implied, and by which, therefore, the public might be deceived, should be punishable on summary conviction by a fine not exceeding £20. The object was not to prohibit or to punish practice by unregistered persons or to protect the profession, but to prevent the public from being deceived. Even in the year in which the Act came into operation certain persons maintained that the duty of enforcing Clause 40 rested with the General Medical Council; and in 1859 a registered practitioner wrote to the Home Office to complain that the Council was not taking action in this respect. The letter was transmitted to the Council by the Government, with a request for any observations upon it which the Council might desire to make, and it was referred by the Council to a committee, which had the assistance of the then legal adviser, the late Mr. Ouvry, a solicitor of the highest eminence. The committee reported that no duty of prosecution was cast upon the Council by the Act; that in Scotland and Ireland any required prosecutions would be undertaken by a public officer; that, unfortunately, no similar provision existed in England, where many prosecutions which ought to be matters of public concern were left to private persons or associations; and that in this respect offences against the Medical Act were on the same footing as offences at large. The report was adopted by the Council and was forwarded to the Home Office as a reply to the letter which had been received. The reply was of course communicated to the law officers of the Crown and was received by the Government with perfect acquiescence. It left the question where it stands to-day—namely, in the position that the Council does not recognise any duty to prosecute under Clause 40, but that it retains full power to do so whenever it may be expedient. It does not appear on the report, but is known to me from private sources, that the clause, in the opinion of Mr. Ouvry, was so drawn as to place many serious difficulties in the way of enforcing it, and that he thought the prestige of the Council more likely to be damaged by failures than to be increased by successes. Certain prosecutions have since been undertaken by the Medical Defence Union, an eminently proper body for the purpose, but at least some of them have failed, and the failures have to some extent been due, in the opinion of the legal advisers of the Council, to an inadequate appreciation of the legal difficulties in the way. For this reason, and in order to establish precedents, the Council itself has prosecuted in a few carefully selected cases, and I believe I am right in saying that convictions have been obtained in all of them. The Council has shown the way, but I do not think it in the least likely that it will institute similar prosecutions in any large number of cases, or in any cases which do not offer points of special difficulty or interest.

In truth, gentlemen, the Council is not in the least adapted by the nature of its constitution to be a prosecuting body. It consists of thirty persons, it meets only twice a year for about seven or eight days on each occasion, and irrespectively of the hotel and travelling allowances of members not resident in London the meetings cost £37 10s. per hour. Prosecutions of the class in question ought to be undertaken by the police authorities, whose proper business it is to do moral scavenging of this kind; and I for one think it should be the aim of the profession to cast such prosecutions upon the shoulders of the police and not upon either public bodies or private associations connected with itself. The whole affair seems to me to be inexpressibly mean, dirty, and degrading; and, as I have already said, I think the injury done to the profession by quacks is probably far less than the injury done by the abuse of hospitals, the counter-prescribing of druggists, and the sale of advertised medicines. Quite lately, however, a practically interminable vista of prosecutions has been opened before us. Mr. Horsley contends, if I understand him, and I carefully insert this proviso because his words do not always fulfil Cobbett's ideal of being as "clear as a pebbled brook," that anything which can be called medical practice is an offence if done by an unregistered person, and that every such unregistered person can be made amenable to the law. Mr. Horsley is, I believe, possessed by the delusion that he himself is a great lawyer. I do not share this delusion, but can only hope that it adds to his happiness, as by the amusement which its manifestations sometimes afford me it unquestionably adds to mine. His law appears to me to be largely traceable to three sources — namely, to comic opera, to novels written by ladies who are not members of the legal profession, and to the light of his own unaided genius. I am sure he must be indebted to *The Mikado* for his evident belief that all who differ from him should be treated by "something lingering, with hot oil in it." Apart from this his law seems to me to consist of what our ancestors were wont to call "quirks"—little verbal stratagems, attempts to twist obvious meanings into totally different ones; the sort of thing, in fact, by which we can imagine a thieves' attorney endeavouring to bamboozle a country magistrate in order to prevent the committal of his client. Now the judges, for the last fifty years at least, have set their faces against all this; and have acted very much in the spirit of Lord Esher's celebrated saying that their chief duty was to find legal reasons for the support of common-sense conclusions. We had during the last session of the Council a droll illustration of the nature and extent of Mr. Horsley's legal attainments. We were sitting *in camerâ*, so that the incident did not fall under the observation of the reporters. He delivered a judgment, or treated us to a disquisition, nearly an hour long, to acquaint us with his view as to the state of the law on a particular question; and he ended by an appeal to our standing counsel, Mr. Muir Mackenzie: "Am I not right?" Mr. Mackenzie was content to confine his answer to the four words, "Not in my opinion"; on which Mr. Horsley triumphantly flourished a printed copy of the Act of Parliament on which he relied, and said, "But it must be so. Look at the position of this comma." He was absolutely ignorant of the fact known, I should suppose, to every Board School child in the fourth standard, that there are no stops in an Act of Parliament. He positively thought that the meaning of the law might be altered at the caprice of a printer's man. Well, our amateur lawyer, who will never, I trust, have any other client than himself, has now made the discovery that because the Medical Act of 1858 declares that registered persons shall possess certain privileges medical practice by any unregistered person is illegal. This is a very pretty mare's nest. The object of the Act is not either to prevent or to punish practice by unregistered persons, but solely to prevent the public from being deceived by them. It is expedient, in the words of the Act, that the public should be able to distinguish qualified from unqualified practitioners. The practice of the latter is not illegal, although, if I may modify an expression used by Professor Huxley, it is "non-legal"; but there is no penalty for it, either under the Medical Act or any other, unless it be the Apothecaries Act of 1815. Here, again, as it seems to me—and I wish to say that I am only expressing my own opinion, and not speaking at all as the representative of the Society or by its authority—here, again, the object of the Legislature was not to protect the medical profession but to protect a corporation in the conduct of a great work of public utility. The Society,

at the request of the Government, incurred heavy expenses and took much trouble in order to organise and provide a system of examination for medical practitioners. The Society could only be recouped by the moderate fees which it was permitted to charge for its Licence, and therefore received the privilege of protecting itself and its Licentiates from the competition of unlicensed persons. As long as the Society was the only source of medical qualification for general practitioners in England it was worth its while to enforce the law in self defence, but the position was wholly altered by the Act of 1858, and by the institution of the Licence of the Royal College of Physicians of London. The Society became only one licensing body among many, and there is no apparent reason why it should stand in the gap for the defence of the Licentiates of other corporations. It does prosecute occasionally, often enough to maintain its powers in exercise and efficiency; but the prosecutions are very costly, and the revenues derived by the Society from the profession have diminished. If every general practitioner in England would take the Licence of the Society in addition to any other which he may possess, I have no doubt that the Society would respond to the altered position in which it would be placed, and would institute prosecutions whenever and wherever they might be required. But as long as a large proportion of the profession contributes nothing to its support, this proportion has not, as it seems to me, any valid claim to its assistance; and only the Society itself is able to put the penal clauses of its Acts into operation.

It is well known to all who are conversant with the history of the Act of 1858, and with the discussions then held in Parliament, that very strenuous endeavours were made by energetic medical reformers to obtain the insertion of clauses for the punishment of unqualified practitioners, and that these endeavours were unsuccessful. The Government would not support, the Parliament would not accept, any of the clauses for this purpose which were proposed to them; and the chief effect produced was to bring into prominence the great difficulty of putting together any form of words which would fulfil the intended purpose, and which yet would not admit of being warped into constructions improperly repressive of individual liberty, statutory words which would not cover too much. I do not say that the difficulty is insuperable, but I do say that very acute lawyers have hitherto found it so; and if Mr. Horsley will only suspend his labours in the cause of medical reform until he has succeeded in overcoming it, I do not think that, in the short period of life to which I can look forward, I shall again be called upon to consider his proposals. That the Council will attempt to institute prosecutions for alleged offences to which the law has attached no penalty I do not for a moment believe, but it is at least certain that we shall be guided by the opinions of our legal advisers. Mr. Horsley somewhere said or wrote that the legal business of the Council was too much in the hands of the legal advisers, and that in this way failures were brought about; as if he should say that unfortunate results in hospital treatment were due to the patients being too much under the control of the physicians or surgeons. I am glad to have an opportunity of saying that I think it would be impossible to exaggerate the debt which the Council owes to its legal advisers. The Act of 1858 conferred upon the Council a penal jurisdiction against which it provided no appeal, and persons who suffered under this jurisdiction turned naturally to the Court of Queen's Bench for redress. The judges were unanimous in thinking the powers of the Council excessive, and in regarding the exercise of those powers with apprehension or even with hostility. For some years the advocates of the Council had to fight an uphill battle in the courts; and more than one judge expressed surprise that such powers should have been conferred by the Legislature. Thanks to the admirable wisdom of our legal advisers, to the care with which the cases were selected, and to the skill with which they were conducted, the Council has had a practically unbroken record of success; and its decisions have for a long time been treated by the Bench with the utmost consideration. On one or two occasions, notably in refusing to appoint assistant examiners in surgery for the Apothecaries' Hall in Dublin, the Council has disregarded the advice of its law officers; and when it has done this it has been beaten. As I just now said, the Council, with the concurrence of its legal advisers, has lately instituted certain test prosecutions under Clause 40 of the Act of 1858 and it is very likely that it may institute one or two more of a somewhat different kind, in order to determine a question on which there has hitherto been no precise judicial decision—the question, namely, of the position before the law of a qualified person who has either never been registered, or whose name has been erased from the Register for infamous conduct, or in consequence of a conviction, and who nevertheless continues to practise on the strength of a qualification of which he cannot be deprived. Lord Justice Lopes, in his judgment in Allbutt's case, used these remarkable words: "The medical man whose name is erased is not disqualified from practising, and old patients and other medical men invited to meet him in consultation might reasonably desire to know the nature of the offence in respect of which the erasure was made, in order to determine whether they would still continue to employ or to meet him." Strong as this is, it was not a judgment on the particular point, but merely a remark made in illustration of the main argument, and it is highly desirable that a definite judgment should be obtained. It is certain, nevertheless, that nothing will be done in this direction until, in the opinion of our legal advisers, we have a case which will permit the main issue to be clearly raised and finally determined. Any such litigation would probably be carried by appeals to the highest court and we shall not spend money only to obtain a decision on a side issue, such as might not be presented in subsequent cases. One of our main difficulties in this matter arises from the shrieking and clamour of Mr. Horsley and his friends—shrieking and clamour to which we cannot publicly reply without disclosing to possible defendants what our lawyers regard as the weak points in the cases hitherto offered for our consideration. I have no doubt that on this question, as also with regard to Clause 40, we shall in due time obtain a decision which the Courts will accept as binding, and which will govern future proceedings on the same lines. I can hold out no expectation that when this has been done the Council itself will continue to act as a prosecuting body, either with regard to infringements of Clause 40 or with regard to the continued practice of unregistered medical persons or of persons whose names have been erased. We will endeavour to show the way; it will be for others to follow.

I have now referred incidentally to some of the main points dealt with by Mr. Horsley, and must hasten to a conclusion with a mere glance at the rest of his address. I do not know whether Mr. Horsley ever tries to make an accurate statement; it is certain if he does that he never—or hardly ever—succeeds. He says that "because the General Medical Council allowed the Apothecaries' Society to examine in the three subjects of medicine, surgery, and midwifery, then the L.S.A. became a triple qualification." He implies that the Council had some choice in the matter, whereas the decision of the Privy Council in the case of the Irish Hall shows that the appointment of surgical examiners was a mere administrative act which the Council could not have refused to perform, and that the value of the Licence of the Society of Apothecaries is strictly statutory and rests upon the law of the land. He goes on to say that the Society—or Mr. Upton on its behalf—has made a certain "claim," whereas, in fact, no "claim" has been made at all. In reply to a letter from the Council office asking whether the Society had any objection to the restoration of a particular name to the Register, the name having been erased on the ground of infamous conduct, and being that of a person whose Licence from the Society had been his sole qualification, Mr. Upton replied that the Society, on being informed of the original decision of the General Medical Council to erase the name from the Register, had erased it also from the list of Licentiates as permitted by the Act of 1874, but that as the Society had no power to demand the return of the Licence the person still retained it. Mr. Upton used the word "qualification" instead of "licence," but evidently to describe the document by which the qualification was authenticated, and he made no "claim" of any kind, but merely stated the facts and left it to the Council to consider whether the continued possession of the document was or was not important with regard to the question of restoration. It is certain that the qualification had enabled its owner to register in the first instance, and I think it is equally certain that although it was obtained prior to the Act of 1886 it would entitle him to register now if he had omitted to do so previously. The Act of 1886, while introducing as a condition of registration that an examination should

be passed in the three subjects of medicine, surgery, and midwifery, and while repealing with a view to this requirement portions of the Act of 1858, expressly provides that such repeal "shall not affect anything done or suffered, *or any right or title acquired or accrued*, before such repeal takes effect, or any remedy, penalty, or proceeding in respect thereof." However, I will not press the point, because I have reason to believe that Mr. Upton himself will shortly deal with it in a public manner, and because it is one which neither Mr. Horsley nor I can determine. Mr. Horsley says that the representatives of the corporations in the Council "all" voted against Sir Christopher Nixon's motion for an inquiry as to whether the Council could not itself institute a preliminary examination. Mr. Horsley seconded the motion, and not only knew the facts at the time but has since received the official minutes of the meeting, which prove that his statement is not true. Before going into details I would say that until quite recently members of Council scarcely knew by what tenure any individual colleague held his seat; and there was never the smallest tendency to any distinction in the Council chamber between representatives of this and representatives of that. But as the corporation representatives are twenty in number, the Crown representatives five, and the direct representatives five, it follows that no motion can be carried if a large proportion of corporation representatives are opposed to it, or lost if a large proportion of corporation representatives are in favour of it. In the case referred to by Mr. Horsley seven voted for the motion, of whom the mover, Sir Christopher Nixon, and two others—Dr. Atthill and Mr. Tichborne—were corporation representatives, the other four being direct representatives. Two corporation representatives—namely, Sir William Turner, who was in the chair, and I myself—did not vote. Nineteen voted against the motion—namely, three Crown representatives, the other two being absent, one direct representative, and fifteen corporation representatives. I could not support the motion because, like every other old member, I knew the suggestion to be impracticable, and I did not vote against it because it was to some extent in accord with an opinion which I have always entertained and expressed that the preliminary examinations should be controlled by medical rather than by non-medical bodies. But the Council has no power in the matter and if it were to institute a preliminary examination it would not be able to enforce its adoption.

It must not be supposed that I have the slightest sympathy with Mr. Horsley's desire to check entrance into the profession by rendering examinations, whether preliminary or final, unduly severe. This would be a mere trades union device, and a very foolish and unworthy one. Medical students are in large proportion the sons of medical practitioners; and, while due provision should be made for raising the standards in a degree commensurate with the progress of science and with the national advance in general education, parents are entitled to bring their younger sons into the profession on about the same terms which were imposed upon their elder ones. A sudden demand for a much more costly or more extended education than is now required would inflict great hardship upon large numbers of practitioners. The reform in this direction which I think is needed, which I suggested two years ago to the Council, and which I hope the licensing bodies will some day see their way to adopt, is the absolute exclusion from the profession of the chronic failures among students. I should like to see an arrangement resembling that which obtains in the army, so that a student should have a certain number of chances and no more. As it is, our chronics generally struggle through somewhere at last, and they bring discredit and loss upon the profession as a whole.

Before I pass on to the consideration of what reforms would be effectual, and of how they might be produced, I must briefly refer to a complaint which has often cropped up in the course of recent discussions, and by which it is alleged that the profession pays a large amount of money to the Council and that it is entitled to some equivalent return. Well, gentlemen, this plea *in formâ pauperis* seems to me to be what Americans might call "playing rather low down." Every profession which has a legal status pays for it, and we pay less than any other. Prior to the Act of 1858 there was no medical profession recognised by law. There was a chaos of charters, under which different individuals had acquired different rights. The Act of 1858 organised the profession as a whole, and placed all its members in a definite position of statutory equality. For this, according to all precedent, the persons so recognised and organised were required to pay; and the proposal first made in Parliament was to institute a Stamp Duty of five guineas. In the course of the debates on the Bill it was conceded that the payment should be £2 for men then in practice and £5 for men who entered subsequently, and it was also conceded that this money should be devoted to covering the cost of a Council, which should be charged with the duty of maintaining the standard of knowledge and the standard of conduct in the profession, and which should thus indirectly improve the position of every member of it. It is worth while to contrast with ours the position of the legal profession in this respect. The legal profession, including barristers and solicitors, was more numerous than the medical by almost exactly a thousand persons at the census of 1891. Every barrister pays £50 on his admission to practise. Every solicitor pays £80 on his articles, £25 on his admission, and annually £9 in London or £6 in the provinces for the certificate which entitles him to practise. If two brothers started in London at the age of twenty-five, one as a solicitor and the other as a medical man, and retired from work after forty years, the medical man would have paid £5 for his professional rights and privileges and the solicitor would have paid £465 for his. The whole of the medical man's money would have been spent, as I have said, upon a body which is at least intended to maintain the status of the profession and thus, indirectly at least, that of every member of it. The whole of the barrister's or of the solicitor's money goes into the national exchequer through the Excise, and not one single farthing of it is devoted to any purpose which, either directly or indirectly, benefits the practitioners of the law.

And now, gentlemen, Mr. Horsley and his followers cheerfully tell us that we "must" have certain alterations of the law which in their judgment would be helpful to us, and would diminish the difficulties against which we have to contend. "Must" is an excellent word, but leaving for the moment the question whether the proposed alterations would or would not have the effects which some profess to believe, let me ask you how these alterations are to be obtained. As a political force the profession is powerless. Say there are 20,000 of us distributed among 6,000,000 of Parliamentary voters, or one medical to every three hundred non-medical voters, a proportion sufficiently near the truth for practical purposes. There are not many constituencies in which such a proportion would turn the scale. Suppose there were a contested election at Norwich or at Great Yarmouth, places in which the so-called medical aid societies are very strong, and that one candidate were induced to promise that he would support in Parliament a Bill for increasing the power of medical men to control the operations of these societies, do you think that such a candidate would be helped or hindered in the constituency? Rely upon it, gentlemen, that Parliament will never take one step in the direction of repressing quackery, or of protecting the medical profession, in excess of what they, not themselves medical persons, see to be for the advantage, not of the profession, but of the public; and therefore the question in its present phase is not so much legislative as educational. Remember, too, the last attempt at legislation in the interests of the profession. The Duke of Richmond, then Lord President of the Council, if I remember rightly, early in the seventies, did his very best to carry a Bill which should be satisfactory to the medical profession; but the representations made to him on the subject were so conflicting, so contradictory, and the claims put forward by some of the spokesmen of the profession were so much in excess of anything that the Government felt able to advocate or that Parliament could be expected to grant, that he abandoned the project in despair. I do not myself believe that at the present time there is a shadow of a chance of inducing either the Government or Parliament to look seriously at any considerable measure of medical legislation; and I do believe that if we were now to go to Parliament the powers which we possess would be more likely to be curtailed than to be extended.

What, then, is to be done? My own conviction is that the corporations might do a good deal. As one illustration I may remind you that the Irish College of Surgeons requires its dental licentiates to sign an undertaking not to advertise and to surrender their Licences if they do. The General Medical Council, in accordance with the decisions of the courts,

cannot erase the name of a practitioner merely for advertising, nor unless there be something in the character of the advertisements which can fairly be described as infamous; but the Council has already erased the name of a dentist, not for advertising, but for the offence of violating the engagement not to advertise into which he had entered with his College. Now what is to prevent the corporations, or at least many of them, from making it a condition of their Licences that the holders should not enter into any engagements by which non-medical persons, such as the members of aid societies, would derive pecuniary profit from their work. The Society of Apothecaries cannot now do this, because it is required by the Act of 1815 to examine all persons who come to it with evidence of having completed the necessary studies, and to license all of them who satisfy the examiners; but the conjoint boards and the universities would, I believe, be able to impose any reasonable conditions. Then, again, might not the other corporations or their licentiates come to the assistance of the Society of Apothecaries with reference to the cost of prosecutions against unqualified persons? I think they might; and I think that all members of the profession should take steps to press these views, in so far as they approve of them, upon the licensing bodies from which their qualifications are derived. Let the profession organise itself, preferably, I think, by the licentiates of each body combining to influence their own licensing authority, not with mere clamour and abuse and noise and incoherence, but with orderly steps, directed to the attainment of some near and practicable goal. Even when this is done there will remain what has for many years seemed to me to be the most urgent of all our wants—a systematic endeavour to educate public opinion on subjects with which we are familiar, but which our clients and our legislators do not understand. How many Members of Parliament, how many heads of households, have any conception of the amount of injury that is done to the public health by swallowing the quack medicines which are now consumed? Why should we not make systematic endeavours to enlighten them? The only persons, as far as I know, who have done any good work in this direction are Trousseau in Paris and Priestley Smith in Birmingham. Why should they be left to stand alone? Why shou'd not practitioners organise the systematic delivery of lectures in schoolrooms and mechanics' institutes? Our enemies are not idle; why should we not learn from our enemies? Remember that every proprietor of quack medicine, every shareholder in Warner's Safe Cure or in Sequah, Limited, every organiser of an "anti" society, has a direct pecuniary interest in bringing the teaching of the medical profession into contempt and disrepute in exaggerating its uncertainties, in magnifying its failures. Our work in the direction of medical reform in my humble judgment should for some years to come be mainly educational and this phase of it has been so utterly neglected that there are long and heavy arrears for us to make up. As soon as we have made even a little progress we may seek to have that progress crystallised into legal enactments of a kind which would now be refused to us and which I think it would now be waste of time even to ask for. We have suffered the public to remain in ignorance; it is our interest as much as it is our duty to enlighten them. It must be thirty years ago that I urged this view of the case upon a meeting of the British Medical Association at Leamington and I have lately received gratifying proofs that men of light and leading in the profession are coming round to my opinion. In my humble way and in the use of my limited opportunities I have not been idle, and as a single specimen of my work in this direction I might mention the history of the progress of medicine and surgery between 1837 and 1887 which I contributed to Mr. Humphry Ward's "Reign of Victoria." If any of my assailants can show that he has done as much I will be the first to acknowledge him as a fellow worker. In the meanwhile I will venture upon a single word of caution. The public not unnaturally have come to look upon eminent physicians who after long lives of devotion to professional work have received honours at the hands of their sovereign, as men who represent all that is best in the profession which they adorn. Mr. Horsley to all appearance looks upon them merely as proper subjects for unstinted vituperation. His vituperation is, of course, harmless; but before you either endorse his views or accept his championship it might be wise to consider how his controversial methods are likely to affect the governing classes of the country, whose understandings must be convinced and whose goodwill must be secured before any improved laws on medical questions can be enacted. I believe these controversial methods to be highly dangerous. In a word, as far as I can judge of them, they are calculated to ruin any cause which may have the ill fortune to obtain Mr. Horsley's advocacy.

[*Note.*—Mr. Horsley's reply will be found on page 247 of our present issue.]

Opening Address

ON

THE INFLUENCE OF PATHOLOGY UPON THERAPEUTICS.

Delivered before the Pathological Society of Reading on Oct. 14th, 1897,

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MR. PRESIDENT AND GENTLEMEN,—It has been debated whether Medicine is a Science or an Art, but surely this, like many other controversies, is based on confusion of terms. Medicine (*ars medicina, ἡ ἰατρικὴ τέχνη—Arzneikunst*) is the *art* of healing and can never be anything else. For it is practised and its end is to preserve or restore health; it is not speculative, aiming at true conceptions, but active, aiming at increased skill.

It deals with the most diverse objects, the effect of mechanical causes like a broken rib or a hernia, the chemical effects of poisons, the results of insufficient supply of food or of a foreign body in the larynx, the bladder, or the ear, the complications of a physiological process like parturition, the natural decay of a living organism, or the disturbance produced by the invasion of a swarm of animal or vegetable parasites. But like other arts—navigation, agriculture, engineering—the art of medicine depends on science, sometimes, as in preventing outbreaks of cholera or enteric fever, in treatment of mineral poisons by antidotes and in correcting deformities of the limbs, it is very closely dependent on scientific knowledge. We may speak of physiology, pathology, and pharmacology as the medical sciences; so we may speak of the science of war; but preventive and curative medicine, like strategy and tactics, still remains an art, and medical science means only physiology in its widest term, including the physiology of disease and the effect of drugs and poisons.

Pathology as studied by this and kindred societies is not mere morbid anatomy but the inquiry into the natural history of disease, the relation of cause and effect in disordered bodily processes, the disturbing action of mechanical agents, of heat and cold, of poisons and of parasites on human physiology. The pathology of the ancients and that current in the revived learning of the sixteenth, seventeenth, and even the eighteenth centuries was fanciful and erroneous, for it was not based on the facts of morbid anatomy, whereas from Harvey onwards normal physiology has sought the secure basis of anatomy to go on. It is only in the present century that the anatomy and histology of disease have been studied for their own sake; it is only within our own memory that the indispensable instrument of experiment has been added to that of observation. The foundation of morbid anatomy was laid by Baillie, Laennec, Cruveilhier, and Rokitansky and has been completed by many still living. The science of morbid physiology was begun by Virchow and carried on by Cohnheim, by Koch and many others in Germany, by Pasteur and his disciples in France, and by a multitude of later investigators not only on the Continent but in England and America.

The old pathology had at least this merit—that it looked on diseases as processes. More recently it was too much the habit to regard the hepatised lung, the calculus in the kidney, or the tumour in the brain as alone "the disease," whereas the symptoms they cause have at least as

good a claim to be part of it and the process by which the stone is formed or the lung solidified no less. The old physicians were wrong in ascribing cirrhosis of liver to the effect of ascites and albuminuria to the effect of anasarca; but while we now know that the obstructed portal circulation is the direct cause of the ascites we must also ask how the obstruction is produced. In other words we must regard disease as a process of which the origin as well as the results need investigation, and we cannot be satisfied till the *sedes et causas morborum* which Morgagni put before us as the objects of inquiry have both been discovered.

Diseases are processes, just as "natural" and necessary as health, and they exhibit disturbance not abolition of the processes of physiology. The heart is working under the control of the vagus and the sympathetic nerves with more or less irregular rhythm. In pyrexia the thermotaxic nerves are at work no less than in health, only their action is altered. Involution, degeneration, decay, and death are as much normal events as evolution, growth, and birth. And this is an encouraging view to take, for if disease is only perversion the perverted function may be restored; if we know what sets things wrong we may hope to set them right again. When we discover a parasite we may hope to poison it; when we isolate a toxin we may hope to find an antitoxin.

Within the memory of living men it was believed that scabies was caused not by the presence of the acarus but by a peculiar dyscrasia psorica and that the trichophyton was not the cause but an accident or a result of ringworm. When the pathology of these maladies was ascertained their treatment became at once rational and effectual. The establishment of the specific character of diphtheria, the identification of its bacillus, and the discovery of protective inoculation with the serum of an immunised animal have, as the result of purely scientific researches, led to the practical results with which we are all familiar. When the true pathology of the "cretinoid condition in adults" now known as myxœdema had been discovered to depend on absence of the thyroid body its successful treatment was at once indicated.

It has sometimes been said that if the labour and skill employed on pathology had been devoted to therapeutics the art of medicine would be more advanced than it is. I do not believe it for a moment. Now and then a great discovery like that of Jenner is made by observation and experience alone and it is not until long after that vaccination turns out to be only an example of the general method of combating disease by means of an attenuated virus. Now and then a remedy is hit upon by accident, like the salicylates in rheumatism, the bromides in epilepsy, or the iodides in actinomycosis. But think of the prevention of cholera and enteric fever by the discovery that their virus is conveyed in drinking water, of the prevention of trichiniasis by the discovery that it depends on a parasite which is killed by cooking meat, of the prevention of lardaceous disease by the discovery that it is due to prolonged suppuration, and, above all, of the prevention of pyæmia after operations and of puerperal fever by the discovery that they are due to septic microphytes. Think of how the discovery of the origin of scurvy and of rickets has led to their cure by proper diet and how the discovery of the cause of lead colic has led to its detection and cure.

The application of pathology to practice does not exclude the salutary check of experience. The same applies to the practice of engineering and other arts based on science. After the mathematical formula has been worked out for a bridge or a ship the result must be tested at last by trial weights and trial trips. Pathology indicates a probable line of treatment, clinical experimentation decides whether it is trustworthy. Who could have guessed that thyroid gland when digested would retain its efficacy? Why do salicyl compounds cure rheumatic synovitis and, as I believe, prevent pericarditis and yet have no influence on endocarditis? Why does mercury so seldom cure tabes even when preceded by syphilis? Why does not excision of a nerve cure neuralgia? Sometimes for better and sometimes for worse we find that many of the results of trial by the bedside differ from those of pathological forecast or of experiment on animals and it is by trial at the bedside that we must be guided. Nevertheless in the examples I have already quoted and in many others the clinical results of pathological research are brilliantly successful.

Again, a knowledge of pathology directs diagnosis and rational treatment by indicating what is the most common and therefore in a given case the most probable explanation of symptoms. The older pathologists, Rokitansky, for example, seem to have thought that every organ was liable to every disease. Malformation and senile decay, degeneration, hypertrophy, atrophy and inflammation were supposed to effect every organ alike. But we soon learn that it is not really so. There is no such disease as phrenitis or primary abscess of the lung and no such thing as active congestion except as a part of inflammation. The liver, the testes, and the kidney have each their own special forms of inflammation, of degeneration, and of new growth. Thus when we have ascertained the seat of a disease we have only a limited choice of probabilities as to its nature. For instance, if the symptoms point to tumour of the cerebellum and if the patient is a child, we know by experience that it is most likely to be tuberculous.

So the frequency of invagination above other forms of intestinal obstruction in children, the liability to gall-stones of middle-aged women, the excessive rarity of cancer on other than an epithelial surface, the frequency of empyema and rarity of chronic consolidation as a sequel of pneumonia,—all these pathological facts are of the utmost value in diagnosis and in treatment. How much has surgical practice gained by the belief which I for one hold that cancer is of local not of "constitutional" origin. The bold removal of the entire mamma before the glands are implicated would have been thought needless or unjustified once, but now it is practised on pathological grounds and with most encouraging results. As Mr. Hutchinson has forcibly argued, cancer of the tongue should be removed before it is diagnosed, not after enlarged glands and bleeding ulceration have made its diagnosis and unhappily its prognosis obvious to the least experienced student.

Let us now turn in contrast to the kind of practice which is not based upon pathology and we shall find it to be not only irrational but also futile. Such is any therapeutical system which depends on a universal theory of disease—a blunder in theory and ridiculous when applied to instances. The "depletory" and "corroborant" systems of medicine, those which depended on "sympathies" or on "signatures," the systems of "allopathy" or "homœopathy," are not wrong answers to a serious question but attempts to solve a meaningless problem. There is no such thing as "Disease in the abstract." Diseases are mutually related only by their effect upon us. A grain of arsenic, a leaden bullet, a predatory tapeworm, a concretion of calcium oxalate, a chemical change in fibrinogen, or a calcification of tissues—what have these in common and how can their effects be met by a single principle of treatment? The way of looking at disease as a single thing, as something foreign to human nature, which invades it from without, though true of some diseases (traumatic and parasitic for instance) is certainly untrue of most. Diseases are as natural as health, and the reaction of the living organism to injurious stimulants is the evidence of life not death.

If we fix our attention on symptoms and direct our treatment to them alone we may please the majority of our patients (who can always supply us with the seat and the cause of their disease and expect from us only the appropriate remedy), but we shall never satisfy our own conscience. For we know or ought to know that symptoms are only indications of the "seat and the causes of diseases," and that while these are undiscovered those can only be dealt with in the dark—uselessly or injuriously. If the common and utterly baseless belief were true—that there is a remedy for every malady if only we could discover it—then all we should have to do would be to draw up a complete list of diseases and write against each its remedy, and this plan might be elaborated into a mechanical contrivance by which every patient would come with his complaint, would put a penny in the particular slot and the "appropriate remedy" would roll out. How common is the belief that when a long course of intemperance or neglect of the ordinary rules of health has ended in grave structural changes all can be undone by a few doses of physic, or that any treatment can prevent the evil effects of habits which are still going on. How widespread this belief is, how it survives countless disappointments, and is not staggered by any absurdity is shown by the success of advertised remedies, vaunted by those who make them, for the most part forgotten in a twelvemonth but succeeded by fresh and no less wonderful nostrums made not to cure but to sell. The same habit of mind which believes in patent medicines

believes in the marvellous effect of electricity and particularly of frictional or Franklinic electricity. Now electricity is no longer a mystery or not more so than magnetism and chemical affinity. There is no reason to ascribe to it any powers beyond those which may be demonstrated in the moist chamber on a nerve-muscle preparation. As a means of diagnosis the reaction of degeneration is most valuable. As an excitant to muscular contraction Faradaism or the interrupted galvanic current is the most convenient agent we possess and slowly interrupted galvanism by keeping a segment of nerve in a state of anelectrotonus becomes a useful anæsthetic. But is there any reason to go beyond this and to believe that an electrical current acts otherwise than by its strictly demonstrable physiological effects on muscle and nerve?

In like manner is it not reasonable to question the vast therapeutical importance ascribed to mineral baths and waters? That cold water is an excellent thing for people in health and that hot baths are useful for myalgia and hot douches for osteo-arthritis is perfectly true; but that it can make the slightest difference whether we use water that comes hot out of the earth or that which has been heated in a kitchen boiler is an assertion that only needs stating to be ridiculous. Now is it less absurd to believe that ascertained doses of well-known salts like magnesium and sodium sulphate, sodium chloride, and carbonate, or minute doses of lithium or iron or arsenic, have any different effect when taken ready dissolved in natural water from what they have when weighed out and dissolved on the druggist's counter? If it be answered that small doses frequently repeated are sometimes more useful than larger ones taken occasionally the answer is obvious; that the patient at home can do either one or the other as his physician deems best. If it be answered that the large amount of water is a good diuretic, laxative, and diaphoretic, again we admit it, but taken in reasonable amount and in suitable cases this is what we order our patients at home; and on this score one water is just as good as another. If it be answered that some patients will not take saline laxatives and alkalies from the druggist's shop but will take them after a long journey and while listening to a band, this also is true, but bears rather on the folly of human nature than on the therapeutics of salines.

Surely we must condemn not only the exploded systems of sympathies and signatures, the Brunonian and the homœopathic, but all systems as systems and all attempts to base treatment on occult properties. The one touchstone for efficient treatment is experience, spread over many lands, prolonged for many years, attested by many competent witnesses. And the one safeguard that our Practice shall be rational and honest is that it follows the teaching of Pathology.

CONSERVATIVE SURGERY OF THE SPLEEN:

A BLOODLESS METHOD OF PARTIAL EXCISION PERFORMED ON TWENTY-TWO DOGS WITH TWENTY-ONE RECOVERIES.

WITH NOTES OF THE BLOOD EXAMINATIONS BEFORE AND AFTER OPERATION.

BY H. MARTYN JORDAN, F.R.C.S. ENG.,

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WHILST in India my attention was attracted by the great number of people suffering from enlargement of the spleen and by the frequency with which cases of death from rupture of this organ were reported in the newspapers. The violence needed to rupture the spleen was often very slight, a gentle blow with a walking-stick, a sharp push with the hand, a slight kick with the naked foot, a prod by the end of the shaft of a carriage going at a walking pace, &c., being sufficient in many cases. Palpation revealed a greatly varied condition of the organ. It was often tender and soft, in other cases painless, hard, and resistant. In size it varied considerably, and in speaking of the native of India one might almost say that it was normal for the spleen to extend from the eighth to the twelfth ribs, it being the exception to find the splenic dulness confined to our European limit, and in practice unless the edge could be felt below the margins of the ribs the patient was regarded as having a normal spleen. In some cases the organ extended across the abdomen and the edge could be felt in the right iliac region—as in one of my servants, a dog-boy, aged nine years—and it was not uncommon in these cases to see young boys and girls, and occasionally adults, walking about with the shoulders and head thrown back and the abdomen as prominent as in a six months pregnancy. Between this extreme and the other, in which the edge came just below the margins of the ribs, there was every gradation in size. The enlargement of the spleen interfered greatly with the person's occupation, the sufferers being markedly lethargic and indolent, anæmic, short-breathed, and often cyanosed, with but small power of endurance, and from the careful way in which they performed their work and walked through crowded streets, instinctively shrinking from any possibility of a contusion to the abdomen, it was obvious that they were always conscious of this enlargement.

In the majority of cases, and especially in the soft tender enlargements, the size of the spleen can be reduced very greatly and often brought back to nearly its original size by medicinal means—e.g., the administration of a mixture of the sulphates of quinine, soda, and magnesium in full doses, but some of the hard, painless, chronic forms resist all medical treatment and it is in these that surgery can be advantageously resorted to. These chronic hypertrophies are the cases where the total extirpation of the organ has been attended with most success and this is the operation which has been and still is advocated in these cases. But before an organ be excised a fairly extensive knowledge of its functions should exist or at least a knowledge of means by which the normal function may be artificially replaced, otherwise unfortunate results may accrue similar to those which obtained after the removal of the whole thyroid, results which were only checked by the observations and researches of Schiff, Reverdin, Kocher, Victor Horsley, and others as to the effect of the total extirpation of the organ and for the relief of which we owe so much to the brilliant discovery of Dr. George Murray. I venture here to express the opinion that in the reported cases of successful splenectomies sufficient time had not elapsed between the operation and the report to justify an assumption that no ill-effects would accrue and in connexion with this I would point out the singularly few cases in which the blood has been examined before and after operation.

The functions of the spleen are unfortunately but imperfectly known. It is stated that the whole organ can be excised without affecting the animal's economy beyond a subsequent increase in size of the lymphatic glands, but this statement I am inclined to doubt. In a litter of five healthy pups one month old the whole spleen was excised in one, the half spleen in three, and the other was kept unoperated upon for comparison (at the time I had no hæmocytometer, &c., for blood examinations); one of the partial excisions died from shock, the other two made excellent recoveries and speedily grew big and fat, growing, as it happened, somewhat faster than the untouched brother. The pup whose whole spleen had been removed remained fairly well for a short time, then gradually became emaciated and died from marasmus three weeks after operation, at which time its framework was distinctly smaller than that of the other three. In other cases where I excised the whole spleen (which, unfortunately, were operated upon only a short time before my departure from India and so did not permit of a sufficiently long supervision) the dogs suffered considerably from shock and were markedly quiet and apparently distressed for days afterwards and ate but little, conduct which was quite unlike that of the dogs upon whom other operations had been performed. Again, the following reports of splenectomies show that the condition of the blood is materially interfered with. Vulpius[1] states that in eleven observations after splenectomy there was a more or less rapid and pronounced increase in the number of leucocytes. In Malin's[2] case (extirpation for axial rotation on Jan. 2nd, 1894) the examinations on the second and fifteenth days after operation showed the blood to be normal and the patient left the hospital on Jan. 25th "in good general health." On April 28th there were 4,840,000 red and 30,000 white corpuscles per c.mm. (1 white to 161 red); 50 per cent.

[1] Medical Annual, 1895. Reported by Mayo Robson.

[2] THE LANCET, Jan. 13th, Sept. 15th, 1894, and quoted by Mayo Robson in the Medical Annual, 1895.

hæmoglobin, and a fairly considerable number of large white nucleated corpuscles varying in diameter from 20 μ to 50 μ and in which were contained several red corpuscles—in some twenty or more—the red cells apparently undergoing disintegration. On May 23rd (nearly five months after operation) the red cells had decreased to 3,300,000, and the white increased to 50,000 (1 to 66), this being the last recorded note of the case.

That the spleen must have important functions is shown by (1) the intimate and unique way in which the blood is brought into contact with the spleen tissue; (2) the enlargement during digestion; (3) the large rhythmical contractions and expansions; (4) the large white cells in the pulp which contain more or less disintegrated red cells, or else are coloured with hæmoglobin; and (5) the differences between the blood brought to the spleen by the artery and that carried away by the vein, the proportion of white to red corpuscles being 1 to 2000 in the former and from 1 to 60 or 70 in the latter; the blood in the vein is also said to have a higher temperature and to contain smaller, brighter, less flattened red cells which do not form rouleaux and on which water has not the same destructive power that it has on the ordinary red cell, and it also contains an increased proportion of the products of oxidation or extractives as well as hæmoglobin or its derivatives free in the plasma. The spleen, therefore, must have a most important influence on the life-history of the red cell, probably being the crematorium of untold millions of the "used up" and the health resort of the invalids. Again from the great amount of lymphoid tissue in the organ, the great increase in the number of the white cells in the splenic vein, the increase of them in the general circulation in diseases of the spleen, the leucocytosis in fevers where the organ is also enlarged, and the increase following its irritation, as will be seen in the accompanying tabular statement, it may be considered certain that the spleen is a great manufactory of the white cell.

These considerations impressed me with the great importance of leaving a portion of the spleen to fulfil its functions and led me to devise a method of partial excision, by which means the organ can be reduced sufficiently in size to ensure its being under the protection of the costal arch. In addition I hoped that such an operation might throw light upon the functions of the spleen and possibly upon some points in the etiology of malarial fever. It may be mentioned here that with the latter object in view in three cases the spleen was exposed and, to irritate the organ, Morton's fluid injected into its substance. This was done in conjunction with my friend Surgeon-Lieutenant-Colonel Lawrie, but beyond the fact that the dogs were very quiet with hot noses, accelerated pulse, and a possible slight increase of temperature for a couple of days, no result was obtained and the blood examinations were negative.

Anatomy.—The anatomy of the dog's spleen is very similar to that of the human being, the most marked difference being in its shape, which is more elongated, flatter, with a distinct depression or fissure running transversely from about midway along its anterior border. Its size varied considerably, chiefly with the size of the dog, but in a few cases it was fibroid; it was generally from 5 to 6 in. long, from 2 to 2½ in. broad, and nearly 1 in. thick. The splenic artery divides about 1½ to 2 in. from the spleen into branches (from four to eight in number) which spread out, like the ribs of a fan, to enter the hilus which extends lengthways along the inner surface of the spleen terminating a short distance from either end. The phrenic artery often gives off a branch which supplies the upper extremity of the spleen.

The operation.—Under chloroform the abdomen and thorax were well washed and the left side was shaved and rendered as aseptic as possible. An oblique incision three inches long was made an inch below, and parallel to, the margin of the ribs. The spleen was brought gently out of the wound, lower end foremost, only as far as was necessary, the upper end not being exposed except in those cases where this was the end removed. A pair of Spencer Wells' forceps was applied to the lowest arterial branch where it entered the hilus; another pair of forceps was applied to the same artery about a quarter of an inch farther from the spleen; the tissues between these forceps were then divided with scissors and two more forceps applied, as before, to the next vessel. In this way the gastro-splenic omentum was divided without loss of blood and without undue strain on the pedicle up to the level of the proposed division of the spleen (several arterial branches were left to supply the upper end which was to be retained). The forceps on the spleen-side of the divided gastro-splenic omentum were then laid along the inner surface of the lower end of the spleen and an assistant raised this end and the forceps so that both surfaces of the spleen were well in view. At the level where it was decided to divide the organ the blood-flow through it was arrested by a continuous ligature used in the following way: a long needle threaded with fairly coarse silk twist one and a half feet long[3] was inserted on the inner or "under" surface about half an inch from the edge or border and passed through the thickness of the spleen, emerging on the outer or "upper" surface about the same distance from the edge; the ligature was drawn through until the ends were equal; the free end was then brought up round the border of the spleen and a "double turn" made with the two ends and drawn as tightly as possible, this "turn" being kept over the exit of the needle. The needle was then passed back through the spleen on the occluded side of the organ as close to the line of ligature as possible and an eighth of an inch to the "edge or border side" of the turn; this was done in order that the next loop should include the spleen where the needle had previously passed through, so that any oozing along this track should be stopped when the loop was drawn tight. The needle was then re-passed through the spleen from the under to the upper surface half an inch further on and a double turn again taken and drawn tight. Continuing in this way the breadth of the spleen was traversed. A reef knot was then tied and the ends were cut short. The needle may be passed from the upper to the under surface and the turns made on the under surface, but the way described is the more convenient. The occluded end of the spleen was then cut through close to the line of ligature. Separate ligatures were tied round each portion of the gastro-splenic omentum included in the forceps, any tension on the pedicle being relieved as these were tightened.[4] The peritoneum and the three muscular coats were severally united with continuous sutures, the skin incision not being closed. The whole operation was completed in from fifteen to twenty minutes.

The points in the operation which I wish to emphasise are: 1. Its great facility, especially when the double turn is made by twisting the needle round the free end and so getting this double turn on the needle before drawing tight. 2. The oozing which takes place during the passage of the needle is at once checked by the coarse silk and stopped altogether when the loop is drawn tight. 3. The section of the spleen was absolutely bloodless except in one case where a middle loop had not been tied tightly enough; here bright arterial blood oozed away gently, but a similar ligature at that point, tied tightly, at once stopped the bleeding which did not exceed one drachm. 4. In no case did the ligature cut through the spleen, a little of the pulp only being expressed as the loops were tightened. In the large majority of my cases coarse silk was used for the continuous ligature, but in two or three cases stout carbolised catgut was employed. 5. The very low mortality.

In cases of rupture of the spleen which are seen in time for surgical interference this continuous ligature may be employed to arrest the hæmorrhage, but the procedure to be adopted would depend upon the extent, and position of the rupture. If the injury be of small extent, surrounding the bleeding surfaces with the continuous ligature may be the best treatment; if of larger extent, it would probably save time and be better to excise the damaged portion in the way described. This ligature will also, I believe, be found to be of service in hepatectomy and in small ruptures of the liver. As will be seen in the tabular statement nineteen dogs had the lower half of the spleen excised without a death; three dogs had the upper half removed with one death. In this list a dog that was operated upon the day before my departure from Hyderabad, to demonstrate the operation is not included, as I have no notes of its subsequent progress; Surgeon-Lieutenant-Colonel Lawrie kindly consented to look after the dog and have the blood examined from time to time. None of the dogs in which the lower half was excised appeared to suffer the slightest inconvenience or shock after the operation, they at once ran about unfettered

[3] The length of this will depend upon the breadth of the spleen to be ligatured. At the commencement of these operations a needle was threaded at each end of the silk, but this is unnecessary if the needle be passed in the way described, as the "double turn" brings the needle back into the right position for further use.

[4] In some of my cases these were applied before the spleen was ligatured across. The stage at which these vessels are tied is immaterial.

A TABLE OF 22 CASES OF PARTIAL EXCISION OF THE SPLEEN PERFORMED ON DOGS, SHOWING THE CONDITION OF THE BLOOD, ETC., BEFORE AND AFTER OPERATION.

Case.	Date of operation.	Sex and condition.	Portion of spleen removed.	Temperature (deg. F.), weight, blood corpuscles (per c.mm.). Before operation. Date.	Anal temperature.	Weight in pounds.	Red.	White.	Abnormal.	After operation. Date.	Anal temperature.	Weight in pounds.	Red.	White.	Abnormal.	Remarks.
1	1896 April 15th	Female pup 1 month old	Lower half	1896 —	—	—	—	—	—	1896 May 2nd	—	—	2,740,000	12,000	—	On April 16th the dog was apparently quite well, playing with other pups and taking milk well. On May 2nd the red corpuscles were normal, a few being vacuolated. The white were of two kinds—(1) large, coarsely granular, mononucleated, exhibiting free amœboid movement; and (2) small, circular, finely granular, multinucleated, without movement.
										,, 7th	—	—	2,620,000	14,000	—	
										,, 13th	—	—	2,280,000	16,000	—	
										,, 28th	—	—	3,240,000	20,000	—	The blood was as described above.
										June 15th	102·4	—	3,620,000	30,000	—	
										,, 19th	102 6	—	4,080,000	40,000	—	
										July 1st	102 6	—	3,800,000	40,000	—	On July 1st blood was as last described; the pup was big and fat. Killed; post mortem the spleen was of a flattened globular shape; there was old inflammation of the capsule at the lower border. On section it was normal. The ligature was encapsuled.
2	April 16th	Male pup 1 month old	Lower half	—	—	—	—	—	—	May 2nd	—	—	2,800,000	16,000	—	Blood examined, stained and unstained, on each date. The red were normal; the white were of two kinds: (1) large, coarsely granular, mononucleated, with free movement; and (2) small, circular, finely granular, multinucleated, with no movement.
										,, 7th	—	—	2,600 000	14,000	—	
										,, 16th	—	—	2,700,000	20,000	—	
										June 8th	103·0	—	3,100,000	20,000	—	On June 8th the red were normal; the white were as described above, a few of the small circular being mononuclear.
										,, 11th	103 0	—	3,800,000	30,000	—	On the 11th the blood was as last described.
										July 4th	103·0	—	3,500,000	30,000	—	On July 4th the red were normal, a few being vacuolated; white as last described.
										,, 20th	103 0	—	4,200,000	30,000	—	On the 20th the blood was as last described.
3	April 18th	Healthy female	Lower half	April 18th	103·0	33	—	—	—	May 1st	103·0	33	4,700,000	60,000	—	Blood examined stained and unstained. Red were normal; the white were of two kinds as above described. Some eosinophiles and many neutrophiles. On June 11th it was killed. Post mortem the spleen was found to be of a flattened globular shape the size of a large orange. There was old inflammation of the lower border. On section it was normal; there was no sign of the ligature.
										,, 9th	103·0	33½	3,360,000	50,000	—	
										,, 13th	103·0	34	4,100,000	60,000	—	
										,, 26th	103 0	34½	4,000,000	50,000	—	
										June 10th	103·0	35	4,300,000	50,000	—	
4	April 20th	Female pup 1 month old	Upper half	—	—	—	—	—	—	—	—	—	—	—	—	Many vessels needed ligature including a branch from the phrenic which was nearly overlooked. The operation was more difficult than excision of the lower half. On the 21st the pup had been very quiet and took milk badly. The other pups were worrying it. It died 28 hours after operation. Post mortem the peritoneal cavity was found to be dry. There was no sign of peritonitis. The cut surface of the spleen was covered with a thin layer of lymph.
5	April 21st	Healthy female 18 months old	Lower half	April 21st	103·0	35	—	—	—	—	—	—	—	—	—	On April 21st the red were normal and the white were of two kinds—(1) small, circular, finely granular, multinucleated with no movement; and (2) large, coarsely granular, mononucleated with free movement.

										May 1st	103·0	34½	4,700,000	80,000	—	On May 1st the red were normal. White as above. Small and [illegible]

		18 months old															movement.
											May 1st	103·0	34½	4,700,000	80,000	—	On May 1st the red were normal. White as above. Small variety more numerous than the large.
											,, 9th	103·0	34½	3,660,000	50,000	—	Blood as described above; but on the 9th and 25th white cells, four times the size of the ordinary large variety were seen, multinucleated, with fine and coarse granules in the same cell; free amœboid movement.
											,, 13th	103·0	34½	4,000,000	80,000	—	
											,, 25th	102·8	35	4,200,000	70,000	—	
											,, 28th	103·0	35½	3,860,000	100,000	—	On the 28th suture sinus was laid open and blood taken from wound. The majority of white cells were three times the size of the red and coarsely granular with one nucleus. In the smaller white cell the nuclei varied from 2 to 10 to a cell and took the stain readily, the body of the cell not staining well. Four mononucleated, finely granular cells were seen about the same size as the large coarsely granular. (This examination was hardly fair as the blood was probably mixed with lymph cells from the wound.)
											June 13th	103·0	36	4,050,000	70,000	Spherule with no nucleus and faintly pigmented	On June 13th white of two kinds as above; both stained readily with methylene blue and eosine. No intermediate cells were seen. One spherical body was found, faintly pigmented; there was no apparent nucleus; it stained with methylene blue.
											,, 14th	103·0	36	4,100,000	70,000	—	On the 14th nothing abnormal was seen.
											,, 16th	103·0	36	4,400,000	60,000	Rosettes	On the 16th red and white were as last described. Six rosettes were found in one slide and four in another.
											,, 17th	103·0	36	4,820,000	70,000	—	On the 17th there was nothing abnormal beyond three of the very large white cells.
											,, 18th	103·0	36	4,000,000	60,000	Rosettes	On the 18th five rosettes were found in one slide.
											,, 19th	103·0	36	4,620,000	60,000	Rosette and spherule	On the 9th one spheroidal body was found as on the 13th. A rosette was watched for half an hour and seen to change shape. One of the very large white cells was present in the same field with the rosette.
											,, 20th	103·0	36	4,210,000	70,000	—	On the 20th nothing abnormal was seen.
											,, 24th	103·0	36½	4,500,000	50,000	Rosette	On the 24th a rosette was seen to change shape and finally could hardly be distinguished from a large, coarsely granular white cell.
											,, 25th	103·0	36½	5,000,000	60,000	Rosette	On the 25th a rosette was seen to change shape.
											July 1st	103·0	36½	4,300,000	50,000	Rosettes	On July 1st there were two rosettes on one slide. One large eosinophile.
											,, 18th	103·0	36½	4,000,000	50,000	Rosettes	On the 18th there were several rosettes, one of which changed shape and finally became indistinguishable from a large, coarsely granular white cell.
											,, 22nd	103·0	36½	4,820,000	50,000	—	On the 22nd the dog was handed over to Surgeon-Lieutenant-Colonel Lawrie for further examination.
6	May 5th	Emaciated medium sized female	Lower half	May 4th	103·0	18	5,160,000	60,000	—	—	—	—	—	—	—	—	On May 4th the red were normal; the white were of two kinds as described, some of the large variety being multinucleated.
			—	,, 5th	103·0	18	5,200,000	50,000	—	—	—	—	—	—	—	—	
											May 8th	103·0	17½	4,700,000	70,000	—	On the 8th there was an increase in white corpuscles, the small variety being more numerous; some of them contained only one nucleus.
											,, 13th	103·0	18½	5,400,000	80,000	—	
											June 11th	103·0	21	5,600,000	80,000	—	On June 11th the blood was examined from time to time since the last note, but nothing abnormal was seen. The white cells were as described.
											July 1st	103·0	26	5,200,000	70,000	—	On July 1st the blood was as before. The dog was much fatter and healthier; there had been an increase of 8 lb. since May 4th.
											,, 18th	103·0	26½	5,400,000	60,000	Rosettes and spherule	On the 18th three rosettes and one spheroidal body very faintly pigmented were found in one slide.
											,, 19th	103·0	26½	—	—	—	On the 19th there was nothing abnormal.

A TABLE OF 22 CASES OF PARTIAL EXCISION OF THE SPLEEN PERFORMED ON DOGS, SHOWING THE CONDITION OF THE BLOOD, ETC., BEFORE AND AFTER OPERATION—*Continued.*

Case.	Date of operation.	Sex and condition.	Portion of spleen removed.	Temperature (deg. F.), weight, blood-corpuscles (per c.mm.). Before operation. Date.	Anal temperature.	Weight in pounds.	Red.	White.	Abnormal.	After operation. Date.	Anal temperature.	Weight in pounds.	Red.	White.	Abnormal.	Remarks.
7	1896 May 6th	Healthy male	Lower half	1896 May 4th	102·6	24	5,240,000	40,000	—	1896 —	—	—	—	—	—	On May 4th there was nothing abnormal; the white cells were as described.
				,, 6th	103·0	24	5,100,000	40,000	—	—	—	—	—	—	—	—
										May 10th	103·0	23½	5,200,000	50,000	—	Blood was examined, stained and unstained, on each of these dates; nothing abnormal was found. The white cells were as usual.
										,, 16th	102·8	24	5,400,000	60,000	—	
										June 1st	103·0	25	5,150,000	60,000	—	
										July 3rd	103·0	26	5,210,000	30,000	—	
8	May 9th	Healthy female	Lower half	May 2nd	102·6	29½	5,200,000	37,000	—	—	—	—	—	—	—	On May 2nd the red cells were normal; the white were of two kinds as described, the large variety were more numerous.
				,, 3rd	102·4	29	4,900,000	30,000	—	—	—	—	—	—	—	On the 3rd the blood was as above.
				,, 9th	102·6	29	—	—	—	—	—	—	—	—	—	—
										May 10th	102·6	29½	5,000,000	60,000	—	The red were normal. The white were as described, the small kind stained well and had from 2 to 10 nuclei; the large stained with a cloudy appearance and had only one nucleus which was of various shapes (round, horse-shoe, serpentine, &c.), large eosinophiles.
										,, 13th	102·4	28½	5,840,000	60,000	—	
										June 11th	102·2	29½	5,000,000	60,000	—	
										,, 20th	102·4	29½	5,240,000	70,000	—	On the 20th the red were normal. Some of the large variety of the white were multinucleated.
										July 10th	102·2	30½	5,100,000	60,000	Rosette	On July 10th one rosette, underwent no change.
										,, 11th	102·4	30½	4,800,000	60,000	—	On the 11th there was nothing abnormal.
										,, 16th	102·4	30½	5,300,000	50,000	Rosettes	On the 16th two rosettes, underwent no change.
										,, 17th	102·4	30½	5,400,000	50,000	—	There was nothing abnormal.
										,, 19th	102·2	30½	5,160,000	40,000	—	
										,, 21st	102·2	31	5,300,000	40,000	—	
9	May 9th	Healthy female (resection of four inches of gut on Sept. 12th, 1896—Vide THE LANCET, Oct. 30th, 1897)	Lower half	May 2nd	103·0	28	5,200,000	30,000	—	—	—	—	—	—	—	On May 2nd the red cells were normal; the white were of two kinds as described, the large mononucleated being more numerous.
				,, 4th	103·0	28	4,900,000	30,000	—	—	—	—	—	—	—	—
				,, 9th	103·0	28	5,100,000	30,000	—	—	—	—	—	—	—	On the 9th the blood was normal. The old line of resection of gut was indistinguishable from the rest but for one thin adhesion. The spleen was somewhat enlarged and slightly fibroid.
										May 11th	103·0	27½	5,000,000	50,000	—	The red were normal. Some of the large white cells were multinucleated and some of the small mononucleated.
										,, 13th	103·0	27	5,640,000	40,000	—	
										June 4th	102·6	28	4,900,000	60,000	—	
										,, 10th	102·4	28	5,000,000	50,000	Spherule	On June 10th the red and white were as last described. There was one spheroidal body with no apparent nucleus and faintly pigmented.
										,, 11th	102·6	28	5,300,000	60,000	Spherule	On the 11th spheroidal body as above was seen with large, coarsely granular white cell in contact; after some time the white cell moved away.
										,, 12th	—	—	—	—	—	—

										,, 12th	—	—	—	—	—	There was nothing abnormal.
										,, 13th	—	—	—	—	—	
										,, 15th	—	—	—	—	—	
										,, 16th	102·6	28	4,620,000	50,000	—	
										July 1st	102·4	28½	5,080,000	40,000	Rosette	On July 1st blood was examined from time to time since the last note; nothing abnormal was seen. To-day one rosette was found.
										,, 20th	102·4	28½	5,300,000	30,000	—	On the 20th blood was examined occasionally since the last note; there was nothing abnormal.
10	May 13th	Healthy male	Lower half	May 11th	102·6	25	5,400,000	50,000	—	—	—	—	—	—	—	On May 11th the red cells were normal; the white were of the usual two kinds, small variety more numerous.
				,, 13th	103·0	25	4,340,000	40,000	—	—	—	—	—	—	—	
										May 16th	102·4	24½	3,920,000	80,000	—	Blood was examined each day; there was increase in the white, which were of the usual two kinds.
										,, 21st	103·0	—	3,980,000	70,000	—	
										,, 24th	103·0	25	4,100,000	80,000	—	
										June 11th	103·5	25	3,540,000	60,000	Filaria	On June 11th the small white cells were more numerous than the large and many of them had large granules. An interesting blood-worm was watched for nearly an hour attacking the red cells. See text.
										,, 20th	103·0	24	4,080,000	70,000	—	On the 20th blood was examined every day since the last note; no more filaria were seen. In every other respect the notes of the 11th applied. During this time the dog had been very quiet and apparently not well. The temperature varied between 102·6° and 103°; it had lost weight.
										July 15th	103·0	24½	3,800,000	50,000	—	On July 15th blood was examined frequently since the last note. Nothing abnormal was seen beyond large granules in the small variety of white cells, a certain paleness of the red cells, and what appeared to be a fragment of dead filaria.
11	May 15th	Small male	Lower half	May 14th	102·6	15	3,600,000	30,000	—	—	—	—	—	—	—	On May 14th the blood was normal.
				,, 16th	103·0	15	3,960,000	40,000	—	—	—	—	—	—	—	
										May 17th	102·8	15	3,700,000	60,000	—	The red cells were normal. There was an increase of both kinds of white cells, some of the large being multinucleated and some of the small mononucleated.
										,, 20th	103·0	15	3,900,000	70,000	—	
										June 1st	103·0	16½	3,950,000	60,000	—	
										July 20th	103·0	22	4,600,000	50,000	—	On July 20th the blood was examined occasionally since the last note. The red were increasing and the white decreasing. There was nothing abnormal.
12	May 17th	Very small male	Lower half	May 16th	102·4	12	3,500,000	30,000	—	—	—	—	—	—	—	On May 16th the blood was normal.
				,, 17th	102·6	12	4,100,000	40,000	—	—	—	—	—	—	—	
										May 25th	102·6	12½	3,750,000	70,000	—	On the 25th the blood was normal.
										June 6th	103·0	14	3,860,000	80,000	—	On June 6th the blood was examined occasionally since the last note; there was nothing abnormal. There was increase of both kinds of white cells; the small variety were more numerous.
										,, 16th	102·8	16	3,980,000	70,000	—	The temperature ranged from 102·6° to 103°.
										July 12th	103·0	17½	4,400,000	40,000	—	On July 12th there was nothing abnormal; the white were as usual.
13	May 18th	Healthy female	Lower half	May 17th	103·0	24	5,240,000	40,000	—	—	—	—	—	—	—	On May 17th the blood was normal.
				,, 18th	103·0	24	4,800,000	40,000	—	—	—	—	—	—	—	
										May 20th	103·0	23½	5,000,000	60,000	—	The blood was normal.
										,, 25th	103·0	24	4,800,000	70,000	—	
										June 1st	103·0	25	5,100,000	60,000	—	
										July 13th	103·0	27	5,200,000	50,000	—	On July 13th the blood was examined repeatedly. Since June 1st there was nothing abnormal; the small white variety were more numerous. The temperature was always 103°. Weight was increasing. Large eosinophiles were seen occasionally.

A TABLE OF 22 CASES OF PARTIAL EXCISION OF THE SPLEEN PERFORMED ON DOGS, SHOWING THE CONDITION OF THE BLOOD, ETC., BEFORE AND AFTER OPERATION.—*Continued.*

Case.	Date of operation.	Sex and condition.	Portion of spleen removed.	Temperature (deg. F.), weight, blood-corpuscles (per c.mm.). Before operation. Date.	Anal temperature.	Weight in pounds.	Red.	White.	Abnormal.	After operation. Date.	Anal temperature.	Weight in pounds.	Red.	White.	Abnormal.	Remarks.
14	1896 May 20th	Very large male	Lower half	1896 May 20th	103·0	40	5,520,000	50,000	—	1896 —	—	—	—	—	—	On May 20th the blood was normal.
										May 23rd	103·0	39	5,300,000	80,000	—	On the 23rd the large variety of white cells were more numerous, some of them being multinucleated.
										June 1st	103·0	40	5,600,000	70,000	—	Blood was examined occasionally between these dates. Notes of May 23rd always applied.
										July 10th	103·0	42	5,400,000	60,000	—	
15	May 22nd	Small female	Upper half	May 21st	103·0	14	4,480,000	40,000	—	—	—	—	—	—	—	On May 21st the blood was normal.
				,, 22nd	103·0	14	5,000,000	30,000	—	—	—	—	—	—	—	On the 22nd many vessels required ligaturing including branch from the phrenic.
										May 24th	103·0	14	4,500,000	60,000	—	On the 24th the dog had been and was very quiet, with a bad appetite.
										,, 27th	103·0	14	4,100,000	70,000	—	On the 27th the dog was still quiet; appetite better.
										June 11th	103·0	15	5,200,000	70,000	—	On June 11th the blood was examined occasionally; it was normal. The temperature was always 103°. Dog getting fatter and bigger.
										July 17th	103·0	17½	5,360,000	50,000	—	On July 17th the blood was examined occasionally; it was normal. Small variety of white cells more numerous.
16	May 29th	Healthy male	Lower half	May 27th	103·0	25	6,000,000	50,000	—	—	—	—	—	—	—	On May 27th the blood was normal.
				,, 29th	103·0	25	5,400,000	40,000	—	—	—	—	—	—	—	On the 29th the spleen was slightly enlarged and fibroid.
										June 1st	103·0	24½	5,250,000	60,000	—	The blood was normal; the usual two kinds of white cell. On the last date the large variety had bigger granules than usual.
										,, 15th	103·0	25	5,000,000	70,000	—	
										July 1st	103·0	26	5,400,000	70,000	—	
										,, 12th	103·0	26½	5,600,000	60,000	—	
17	June 2nd	Large healthy female	Lower half	June 2nd	103·0	37	5,700,000	50,000	—	—	—	—	—	—	—	On June 2nd the red cells were normal. Some of the large variety of white cells were multinucleated and some of the small variety mononucleated.
										June 5th	103·0	36½	5,200,000	80,000	—	The red were normal. There was a preponderance of the large variety of white which were chiefly mononucleated.
										,, 12th	103·0	37	5,800,000	90,000	—	
										July 2nd	102·8	38	5,100,000	80,000	—	
										,, 16th	103·0	38	5,400,000	70,000	—	
18	June 8th	Healthy female	Lower half	June 8th	102·8	23	4,600,000	40,000	—	—	—	—	—	—	—	On June 8th the blood was normal.
										June 10th	103·0	22½	4,100,000	70,000	—	The blood was normal; white as usual.
										,, 21st	103·0	23½	4,300,000	80,000	—	
										July 6th	103·0	25	4,000,000	70,000	—	
										,, 21st	103·0	26	4,400,000	60,000	—	
19	June 12th	Large healthy male	Lower half	June 12th	103·0	38	5,160,000	40,000	—	—	—	—	—	—	—	On June 12th the blood was normal.

June 14th 103·0 37 4,850,000 80,000

20	June 19th	Medium sized male	Upper half	June 19th	103·0	25	5,100,000	30,000			June 14th	103·0	37	4,920,000	60,000		The blood was normal; white as usual.
											,, 20th	103·0	38	5,200,000	70,000		
											July 1st	102·8	38	4,400,000	80,000		
											,, 18th	103·0	38½	5,300,000	70,000		
											—	—	—	—	—	—	On June 19th the blood was normal.
											June 21st	103·0	24	5,400,000	50,000	—	On the 20th and 21st the dog was very quiet and refused food. The blood was normal.
											July 1st	103·0	25½	5,000,000	60,000	—	The blood was normal.
											,, 16th	103·0	26	5,200,000	50,000	—	
21	June 25th	Very small female	Lower half	June 25th	102·4	11	3,980,000	50,000	—	—	—	102·6	11	4,100,000	70,000	—	On June 25th the blood was normal; there was a large proportion of white cells of which the large variety preponderated.
											June 28th	102·6	11	4,100,000	70,000	—	The blood was normal. The two varieties of white cells were about equal in number.
											July 10th	102·8	13	4,300,000	80,000	—	
											July 22nd	102·6	14½	4,100,000	70,000	—	
23	July 1st	Healthy female	Lower half	July 1st	103·0	24	5,240,000	40,000	—	—	—	—	—	—	—	—	On July 1st the red were normal. The white were of two kinds, but many of the large coarsely granular variety had two or more nuclei and the small finely granular had only one nucleus.
											July 4th	103·0	23½	5,000,000	60,000	—	The blood was as in the last note, the two varieties being about equal in number.
											,, 7th	103·0	23½	5,400,000	70,000	—	
											,, 20th	103·0	25	5,350,000	70,000	—	

and ate voraciously anything they were given. The three dogs which had the upper half excised suffered greatly and one died from shock. It is the removal of the upper half of the spleen which is in my opinion so full of danger, so prolific of shock and often hæmorrhage from some small vessel which has either been overlooked or else has retracted before the ligatures were tied. The removal of the upper half is more difficult than that of the lower half; many more vessels need ligaturing, including, in some cases, the branch from the phrenic previously mentioned and which may easily be overlooked with fatal results. This artery was present in two of the three excisions of the upper half and in three of my six total excisions. In man it is also occasionally present. Mr. G. A. Wright, of Manchester, and Surgeon-Major Hatch,[5] of Bombay, report cases where hæmorrhage from this vessel caused the death of their patients and Mr. Wright knows of three other similar cases. Again, in removal of the upper half greater tension has to be applied to the pedicle which is, I believe, a distinct cause of shock. Whether the whole spleen or only its upper half be excised does not affect the present argument. In the six cases of total extirpation before referred to all the dogs suffered greatly from shock and there were three deaths, the one already mentioned from marasmus and two from shock. If to these six be added the three in which the upper half was excised with one death we have nine cases and three deaths from shock, a mortality of 33·3 per cent., the survivors also suffering greatly as compared with the nineteen cases of excision of the lower half with no shock or death. May not this great difference be explained by a consideration of the nerve-supply of the spleen and of the relative damage done to the sympathetic nervous system in each case? for on these sympathetic nerves depends the normal tone of all the abdominal vessels and viscera containing any muscular tissue, and all changes in the calibre of these vessels—paralysis or inhibition of their vaso-constrictor fibres causing an extreme fall of blood-pressure, the animal practically bleeding to death into his abdominal vessels—and sudden death has resulted from a slight blow in the epigastric region or from a draught of iced water interfering with the functions of these nerves. It may be well to briefly consider the blood-supply of the spleen first, as the arteries are surrounded or accompanied by the nerves.

The splenic artery, by its pancreatic branches, supplies the body and tail of the pancreas; the left gastro-epiploic running along the greater curvature supplies both surfaces of the stomach and sends branches to the omentum on the left side, some of which may run on to supply the spleen; other branches to the stomach, the vasa brevia, four to eight in number, are given off towards the termination of the splenic artery, some of these arising directly from the trunk and some from the upper two or three of the terminal or splenic branches. The artery then divides some little distance from the spleen into a varying number, from five to ten, terminal or splenic branches which enter at the hilus and ramify in the body of the spleen; some of the upper of these, as we have seen, give off short gastric branches. In addition to the above there is often the branch from the phrenic running to and supplying the spleen.

The nerves which accompany these arteries are derived from the solar plexus. This, the largest sympathetic plexus in the body, is built up by the semilunar ganglia, nerves from the lumbar portion of the gangliated cord of the sympathetic, the great splanchnics, and the vagi. Through its secondary plexuses it supplies the diaphragm (in part) and all the viscera and blood-vessels of the abdomen. Of these secondary plexuses the cœliac chiefly concerns the present argument. This plexus is of large size, derived from the fore-part of the solar plexus, is joined by the two small splanchnics, and on the left side is augmented by large, direct branches from the right vagus. It then furnishes the coronary, hepatic, and splenic plexuses; the latter, surrounding the splenic artery, is again joined by direct branches from the left semilunar ganglion and the right vagus. It supplies the pancreas and stomach through its pancreatic and left gastro-epiploic plexuses, some of the latter running on to the spleen; it again supplies the stomach by branches accompanying the arterial vasa brevia and then running with the terminal branches of the artery ends in the spleen. In addition to these nerves there are branches from the diaphragmatic plexus accompanying the branch from the phrenic artery when this is present. During an operation it

[5] Quoted by Jacobson in his Operations of Surgery, second edition, pp. 840, 841.

is impossible, of course, to separate these nerves from the arteries, so that a ligature necessarily includes both. A comparison of the operations may be thus stated: (*a*) Removal of the whole spleen necessitates the ligaturing of—1. The splenic branches or, what is the same thing in effect, the splenic artery and nerves before they divide into their terminal branches. 2. The vasa brevia arising from the terminal or splenic branches. This must be done even if the trunk of the splenic artery itself be divided or else, with the free anastomoses that exist on the stomach, there will be hæmorrhage backwards along these branches; neglect to ligature these arteries is probably the cause of some of the deaths from hæmorrhage after the extirpation of the organ. 3. The branches from the left gastro-epiploic and phrenic when present. If these have been divided close to the spleen as many as from fifteen to twenty small vessels and their accompanying nerves may be included in the different ligatures on the pedicle. If the splenic artery itself be divided this number would be reduced by the five to ten terminal branches, but the effect on the nervous system would be the same, the "trunk" of the nerve being involved in place of its branches. (*b*) Removal of the upper half necessitates the ligaturing of the same arteries except the lower two or three terminal branches, as many as from twelve to eighteen vessels and nerves being included in the ligatures on the pedicle. (*c*) Removal of the lower half can be effected by ligaturing the lower two or three terminal branches only. In the two latter operations there is in addition the continuous ligature across the spleen.

From this it will be seen that excision of either the whole or the upper half of the spleen involves great damage to the splenic plexus with its intimate—threefold, if I may so call it—connexion with the solar plexus and right vagus; entails direct interference with part of the nerve-supply of the stomach and omentum and severe indirect interference with the vagi and all the sympathetic nerve-supply of the abdomen; the diaphragmatic plexus is often involved and considerable tension has to be applied to the pedicle, and therefore on the cœliac and solar plexus and the vagi, thus augmenting the interference with these nerves. The excision of the lower half entails but slight damage to the splenic plexus and therefore but slight indirect interference with the solar plexus and vagi; the nerve-supply to the stomach, the omentum, and the diaphragmatic plexus is never involved and but slight tension has to be applied to the pedicle. As shock is due to severe inhibition and exhaustion of nerve function [6] and the grosser the lesion the greater is the shock that results, this great difference in the amount of interference with the nervous system in these operations is the explanation, I believe, of the great difference in the amount of shock following them; and in the excision of the whole spleen or of the upper half the resultant shock is due to inhibition and exhaustion of the vaso-constrictor fibres of the abdominal sympathetic and is probably intensified by great interference with the proper performance of the functions of the heart, lungs, stomach, &c., reflexly by means of the vagi. These considerations would induce me to advise in suitable cases in the human being—e.g., abscess, tumour, or cystic disease confined to the lower half or in hypertrophy which resists medicinal treatment—the excision of the lower half in preference to that of the whole spleen, as the same object would be attained—the removal of the disease or the enlargement—whilst a considerable portion of the spleen would be left to carry on its function, and further, there would be as a reasonable inference a considerable reduction in the death-rate.

It will be noticed that immediately after the operation there was as a rule a slight loss of weight; this was quickly recovered, and all the dogs, except Case 10, gained weight subsequently, the least gain being ½ lb. and the greatest 8½ lb. This increase in weight was in the majority of cases undoubtedly due to regular and liberal feeding which in their previous homeless lives the dogs had been unaccustomed to, but in Cases 11, 12, 15, and 21 in which the gain in weight was greatest the dogs were small and probably not full grown at the time of operation, so that part of the increase was most likely due to the normal growth of the dogs. The temperature (rectal) of these dogs was most constant; in nine of the twenty-one survivors it never varied from 103° F.; in three it never quite reached 103°, ranging from 102·2° (Case 8) to 102·8° (Case 21); in eight the highest was 103° and the lowest 102·4° (Cases 9 and 12); in the other (Case 10) on one occasion it reached 103·5°. The greatest individual range of temperature, except Case 10, was 0·6. All these cases were operated upon with a daily atmosphere temperature of from 99° to 104° in the shade. Case 10 stands by itself; it had been accustomed to regular feeding prior to operation, having been a house-dog; it was the only one in which the temperature exceeded 103°, in which there was loss of weight and a marked or permanent alteration in the number of red corpuscles and the only one in which filaria were found in the blood, which probably is the explanation of all these differences. Two of the dogs were subsequently killed by an overdose of chloroform; the spleen had assumed a flattened globular shape and had increased slightly in size since the excision of the other part, but had not attained its original size. The capsule at the site of section showed signs of old inflammation and the omentum was adherent at this point. In one case the continuous ligature was found encapsuled, in the other it had been absorbed.

The blood.—The examinations of the blood and the enumeration [7] of the corpuscles were most interesting. The first five cases are excluded from the following remarks as the number of corpuscles could not be ascertained before operation, and the subsequent enumerations in Cases 1 and 2 showed only a steady increase in number of the red and white coincidently with the growth of the pups; Case 3 showed no marked change and Case 5 will be referred to later. Before operation the number of red corpuscles varied from 3,500,000 in Case 12 to 6,000,000 in Case 16, the average being 4,920,000 per c.mm. If Cases 11, 12, and 21 be excluded, for reasons to be shortly stated, the average would be 5,170,000 per c.mm. The white varied from 30,000 in several cases to 60,000 in Case 6, the average being 41,000 per c.mm.; the proportion of white to red being 1 to 120. After operation in the majority of cases there was no marked change in the number of red corpuscles; excluding Case 10 they averaged 4,900,000 per c.mm., as against 4,920,000 before operation; excluding Cases 11, 12, and 21 the average would be 5,100,000 per c.mm. as against 5,170,000 before operation. This small difference might well be due to errors of observations before or after operation, any one of which would necessarily be multiplied 10,000 times. The white corpuscles showed an immediate increase in number after operation, the smallest increase being 20,000, the greatest 40,000, and the average 30,000 per c.mm., the ratio of white to red being altered to from 1 to 70. This increase reached its maximum soon after the operation, began to diminish a fortnight to six weeks after, and in those cases that were under observation two months after operation the number of white and the proportion of white to red was normal again. This temporary increase was probably due to the irritation of the continuous ligature and the localised inflammation of the spleen and its capsule at the site of section. The Cases 11, 12, and 21 were small dogs which increased considerably in weight after operation; the red cells also increased in number and from a comparison of these cases with the pups (Cases 1 and 2) it is probable that they were not mature at the time the operation was performed and that the increase in weight and in the number of the red cells was consequent to the growth of the dogs.

In the ordinary microscopic examination, stained and unstained—and the following remarks apply to all twenty-one surviving cases—the red cells were normal, in a few cases they were vacuolated, and in Case 10 pale and deficient in hæmoglobin. The white were apparently of two kinds, small and large. The small variety was circular, usually finely granular, with two or more nuclei, but often contained only one nucleus and at times were coarsely granular; they were never seen to change shape. The large variety was usually coarsely granular with one nucleus, the latter being of various shapes, semilunar, round, serpentine, &c., often giving to the cell the appearance of being multinucleated; occasionally these large cells were multinucleated and rarely finely granular; they exhibited free amœboid movement. Sometimes the large and at other times the small variety was more numerous. Although these two kinds were the usual white cells seen at times other forms were found, intermediate in size, sometimes mononucleated, at others multinucleated, sometimes coarsely, at others finely granular and rarely having both fine and coarse granules in the same cell. The impression was thus given that the large and small varieties were only stages in the life of the same cell. In Case 5 there were seen occasionally very large

[6] Foster's Text-book of Physiology, fifth edition, Part III., p. 903.

[7] By Gowers's hæmacytometer.

multinucleated white cells with a diameter two or three times that of the ordinary large variety mentioned above; they exhibited free amœboid movement, had coarse and fine granules in the same cell and often large vacuoles. One of the most interesting points in the blood examinations was the appearance, in Cases 5, 6, 8, and 9, of bodies which were extremely like those Laveran discovered in malarial blood. So great indeed was the similitude that had these bodies been seen in the blood of a patient suffering from malarial fever I have no hesitation in stating that they would have been pointed out as fairly typical specimens of the "rosette" and spherical extra-corpuscular, or free stages, of the parasites. I hope in another paper to describe these bodies more fully. An interesting bloodworm was seen in Case 10 and watched for three-quarters of an hour. It was round in shape and in breadth nearly but not quite the diameter of a red cell. It was impossible to define its length on account of the free movements when alive and to its being coiled up when dead, but when nearly straight it reached across the field (Leitz eyepiece 3, objective 7), one or other end being out of sight. Its body was cylindrical, tapering rapidly near the tail. Its head was slightly smaller in diameter than the body and blunt-ended with a transverse "depression" rather nearer the under than the upper surface. When first seen the worm was gently waving its body in exactly the same way as an eel does when swimming; at short intervals it was seen to retract its head and then rapidly shoot it out. By careful watching it was seen that a red corpuscle was the object aimed at and that as the head shot forward a triangular-shaped "tongue" was protruded from the depression; this was at once withdrawn when the corpuscle was struck and after the first or second attack a minute, darkish speck was seen to leave the corpuscles at each attack and flow into the depression or "mouth" of the worm; after a few attacks the corpuscle was paler than before. Many red corpuscles were in turn attacked and once a large white cell was attacked in the same way, but after two or three blows the worm moved on and to follow it the field had to be changed and so the white cell was lost; when first attacked this cell was moving and my impression was that its movement ceased with the attack, but too short a time was allowed to be sure of this. In about half an hour the worm gradually ceased to attack the red cells and its movements became much more vigorous, swimming about so rapidly that it was difficult to change the field quickly enough to keep the worm in sight. Occasionally at this stage it coiled itself up like a watch-spring and suddenly straightened itself out, dashing the red cells about in all directions; these convulsive or lashing movements became more and more frequent until there was hardly any intermission. The worm then appeared to grow weaker, its movements became less in number and vigour, and at last it lay still, coiled up in two and a half convolutions. As this change of movement was taking place the blood was seen to be coagulating, this probably causing the death of the worm, which then appeared to be faintly striated both longitudinally and circularly.

In conclusion I desire to express my grateful acknowledgements to the medical department of H.H. the Nizam's Government and to Surgeon-Lieutenant-Colonel Lawrie, the residency surgeon and principal of the medical school, for the kindness and courtesy they extended to me during my residence in Hyderabad and for the facilities and resources they so willingly placed at my disposal for these and other investigations. My thanks are also due to Dr. Nelly Evans, Dr. Kalayan Rao, and Dr. Syed Mohammed for their assistance in the blood examinations. Dr. Evans also performed successfully several partial excisions of the spleen by the operation described.

John-street, Adelphi, W.C.

ROYAL METEOROLOGICAL SOCIETY.—The annual meeting of this society was held on Wednesday, the 19th inst., at the Institution of Civil Engineers, Mr. E. Mawley, F.R.H.S., president, being in the chair. The secretary read the report of the Council for the year 1897, showing that there had been an increase in the number of Fellows and that the finances were satisfactory.—Mr. F. C. Bayard, LL.M., was elected president for the year.—The President then gave an address on "Weather Influences on Farm and Garden Crops."

ON A

CASE OF SUPPOSED TRANSMISSION OF SYPHILIS TO THE THIRD GENERATION.

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THE possibility of the transmission of syphilis to the third generation—i.e., from grandparent to grandchildren—is a question of great theoretical interest rather than one of frequent practical importance. Even at the present day the possibility of such transmission rests on no sure or settled basis. Relying on the more than dubious interpretation of certain Biblical texts the lay public have for long accepted and believed in the undoubted and frequent occurrence of such a transmission. Needless to say this aspect of the question is without the pale of scientific scrutiny. Like the laity, a large majority of the profession would seem to have accepted the reality of this transmission. But to me it would appear that in this instance they have been more ready in declaring their belief than in adducing reasons or facts in substantiation of it. A small minority of the profession—including, however, I believe, a large percentage of those who have given special attention to the subject—have gravely doubted the possibility of this transmission to grandchildren, or at least have denied the publication of a single case of such as would bear the investigation of a stricter criticism. Dr. George Ogilvie has lately published an excellent and elaborate paper[1] in which he has carefully and trenchantly criticised every notable case where this transmission has been stated to have occurred. With all that Dr. Ogilvie writes concerning such cases I heartily agree—in fact, with possibly the exception of one published by Boeke[2] no single one of these cases will stand even the most superficial criticism. Boeke's case, moreover, is far from convincing. Recognising the futility of proving the presence of unmistakable syphilis in such cases, and being seemingly still desirous of tracing in the grandchildren some syphilitic heritage from the grandparents, certain writers have claimed a syphilitic origin for numerous maladies in such grandchildren which they have classed under the title of "parasyphilitic." These parasyphilitic maladies, too, they claim, are largely prevalent in the later children of syphilitic parents where the elder children have directly inherited the undoubted complaint. There is not one, however, of such so-called "parasyphilitic" complaints that may not occur in children in families where syphilis can with certainty be excluded. I would then strongly protest against the use of "parasyphilitic" and other like terms. The ills of syphilis are numerous and far-reaching enough without any extra fanciful additions being credited to them. If the case of the transmission of syphilis to the third generation has to rest on the presence of "parasyphilis" in the grandchildren then the proof of such transmission, I would claim, falls to the ground.[3]

The following is a fair example of the class of cases that have been put forward as a proof of the transmission of syphilis from grandparents to grandchildren. In my opinion it is entirely unconvincing on this point. It may perhaps merit publication on other grounds as an example of the singular and unsatisfactory class of progeny that may unaccountably be raised by reputedly healthy parents and of the curious coincidence of two first cousins exhibiting the first symptoms of syphilis in precisely the same form and situation, both of these last being an extremely unusual one. The particulars were furnished me by a distinguished member of the profession who has held high office at the Royal College of Surgeons of England. For reasons that are perfectly intelligible and sufficient he prefers not to publish the case himself, although he will allow me to furnish his name to anyone desiring any further information on the case. That I would controvert his own interpretation of the facts is also known to him and I do so freely with his stated permission.

A man of powerful physique lived to a good old age

[1] The British Journal of Dermatology, October, and November, 1897.
[2] Annales de Dermatologie et Syphiligraphie, tome x., 1889, pp. 782–784.
[3] See note on pp. 28–29 in paper by George Ogilvie before referred to.

and enjoyed life and health. As far as can be known there was no neurotic or other taint in his family history. He married a healthy woman with an equally satisfactory family record. Of this marriage came five sons and two daughters who presented the following curious family history. A, the eldest son, who was peculiar in manner, died at about fifty years of age from obscure abdominal tumour. Of his two children both died young, one from epilepsy and the other from heart disease. B, the second son, had periosteal disease of long standing and his son at twenty-eight years of age had pronounced gummata of the sternum and three ribs. Neither father nor son had ever presented any signs of either primary or secondary syphilis. C, the third son, was healthy, but his son at twenty-five years of age developed gummata in precisely the same situations as his cousin, the son of B. There had never been any indication of syphilis in C and his son denied any primary or secondary manifestations. D, the fourth son, was deformed; he had constant epilepsy and died at forty-five years of age. E, the fifth son, was a deformed dwarf. F, the eldest daughter, was mentally defective. G, the second daughter, was mentally defective. The particulars of the above family history are thoroughly reliable, all the members being personally known to my informant. That the sons of B and C suffered from tertiary syphilis and that no primary or secondary symptoms had been noticed by either of them may also be accepted as undeniable, my informant being confirmed in his opinion on these points by another eminent authority. Arguing from the noted facts, my informant considers that they prove the case of transmission of syphilis to the third generation for the following reasons: that the rearing of a series of degenerates, deformed, epileptic, and weak-minded, by a healthy couple of far more than average mental calibre is a strong presumption of syphilis in the father, and that the presence of syphilis in the two first cousins and the total absence of any evidence of primary and secondary manifestations, either in them or their parents, is a proof that such syphilis was transmitted to the grandsons from their grandfather. "No other theory," he writes, "would account for all the facts of the case." To me I must confess such arguments are far from conclusive. In the first place, beyond rearing a race of degenerates there is a total absence of proof of syphilis in the grandfather. I do not gather, moreover, that although there was a negative history of both primary and secondary manifestations of syphilis that either grandson denied having placed himself in the position of possibly acquiring the direct complaint. Again, the occurrence of gummata at the ages of twenty-eight and twenty-five years as the first noticeable symptoms of an inherited syphilis must be taken as exceptionally rare in any view of the complaint. On the other hand, cases where both primary and secondary symptoms have been missed and tertiary ones first indicate the acquirement of the disease are not uncommon. Such an explanation of the syphilis in the two cousins as the last seems to me to be a much more likely one than the supposition that their complaint was a heritage from a grandparent. Beyond the fact of B having suffered from "periosteal disease of long standing," too, there is a total lack of evidence that either of the fathers of the young men had inherited the disease. This to me materially strengthens the case against the cousins having inherited from their grandfather, for the supposition that syphilis could skip the second generation to reappear in the third is inconsistent with all modern ideas of its nature and propagation.

I have briefly given my reasons against the case being one if transmission of syphilis to the third generation. The fact of the two first cousins having suffered from gummata in precisely the same situations is a remarkable coincidence and an apt illustration of a feature of the disease that was first pointed out to me by Dr. John Thomson, of Edinburgh. This is the tendency there is in some families for the disease to direct its chief attack against one particular organ or tissue. Thus in the members of one family the skin may be the part chiefly affected; in those of another, the abdominal viscera; in those of a third, the bones or nervous system; and so on. Since Dr. Thomson first pointed out this family peculiarity my experience would tend to confirm his observation.

It would not be hard to give general reasons why syphilis could seldom or never descend to the third generation. In the present instance, as I am dealing only with a particular case, I feel it superfluous and unnecessary to do so. In writing of a disease like syphilis in which it is said "everything is possible" it is well not to be too dogmatic. Whilst, then, not absolutely denying the bare possibility of transmission to the third generation I would at least claim that as yet no case has been adduced that can in any true sense be regarded as a proof of such transmission.

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ON THE CHROME-SILVER IMPREGNATION OF FORMALIN-HARDENED BRAIN.

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AT the meeting of the British Medico-Psychological Association held at Newcastle last July my friend and former colleague, Dr. A. W. Campbell,[1] pathologist to the County Asylum, Rainhill, exhibited certain of my early results obtained by using the above method, but at my request withheld a description till its further elaboration. Beyond a general statement by Schäfer[2] that "previous hardening in formol does not interfere with Golgi's method" I have been unable to find any reference to the subject in recent neurological literature and I believe that the possibility of obtaining chrome-silver impregnation in human brains hardened long previously in formalin has not hitherto been demonstrated.

Several observers, however, including Strong,[3] Durig,[4] Kopsch,[5] and Fish,[6] have recommended the use of formaldehyde instead of, or in addition to, the osmic acid in the osmium-bichromate mixture, and Hill[7] has injected the washed-out blood-vessels with 4 per cent. formalin, afterwards hardening in bichromate of potassium and formalin, with satisfactory results.

Period of hardening.—I have obtained excellent results from the brains of cats and half-grown kittens placed whole in 5 per cent. formalin from five weeks to five months previously and from human brains, normal and pathological, hardened whole in 5 per cent. formalin for periods varying from two to twelve months. I have, however, failed even in kittens to obtain impregnation in brains hardened from three to seven days only, probably owing to the hardening in these cases, though apparently complete, being imperfect.

Size of blocks.—Sections of cortex, preferably across a convolution, and not more than an eighth of an inch in thickness, should be transferred to a dish of 5 per cent. formalin and there cut into wedges having a base of a quarter of an inch and including a little white matter. Larger pieces require a chrome bath of longer duration than usual and whilst the impregnation of individual cells is in many cases more perfect the process is less general and consequently of less value to the neuro-pathologist. If the pieces be smaller over-impregnation frequently occurs and even if this accident should not happen very few sections would be available.

Chrome bath.—The pieces of cortex prepared as described and with or without pia mater adhering to them according to circumstances should then be placed without previous washing in a bath containing 1 per cent. of ammonium bichromate. The chrome impregnation is complete after a period varying from a few hours to five days, after which the result deteriorates gradually for three or four weeks when an impregnation of a fern-leaf character alone is obtained. I shall refer at length to this subject in a paper in course of preparation on the nature of the chrome silver process. Chrome baths of strengths of $\frac{1}{4}$ and 2 per cent. give similar results after longer and shorter intervals respectively. If a 5 per cent. bath be used for four days chrome-silver impregnation fails. Müller's fluid and potassium bichromate give less perfect results in my hands. Potassium chromate gives a very diffuse and consequently valueless impregnation and chrome alum and chromic acid are useless.

Silver bath.—After the necessary period of immersion in

[1] Journal of Mental Science, October, 1897, New Series, No. 147.
[2] Practical Histology, second edition, p. 154.
[3] Anatomischer Anzeiger, Band x., p. 494.
[4] Ibid., Band x., p. 659.
[5] Ibid., Band xi., p. 727.
[6] Proceedings of the American Microscopical Society, vol. xvii., p. 319.
[7] Brain, Parts lxxvii. and lxxviii., p. 132.

the chrome bath the pieces of cortex should be rinsed in distilled water and in a 1 per cent. solution of silver nitrate and then placed in a bath of the latter composition for a period varying from sixteen to twenty-four hours. Considerably longer immersion in the silver bath usually causes no deterioration and a ½ or ¾ per cent. solution may be used, but I have obtained better results by means of the stronger bath.

Cutting and mounting.—The pieces of tissue are then to be hardened for a few hours in 60 per cent. alcohol, dried on blotting-paper, embedded, without soaking, in melted paraffin, and after this has cooled cut into sections on a piece of glass by means of Schäfer's triangular microtome, the block and razor during this process being kept wetted with 60 per cent. alcohol. The sections are then to be transferred in order into methylated spirit, absolute alcohol, chloroform, and xylol, and finally to be mounted in xylol balsam without a coverslip.

Development.—I have now for several months, at the suggestion of Professor F. J. Allen, of Mason College, passed my Golgi sections into water and developed and fixed them by the method of Kallius,[8] afterwards treating them as above and mounting under a cover-slip. After proper development, which can only be obtained by experience, the sections do not deteriorate and usually are histologically indistinguishable from those mounted without this treatment.

In conclusion I desire to express my indebtedness to Dr. Wiglesworth and Dr. Campbell, of the County Asylum, Rainhill, Lancashire; to Professor Whitcombe and Dr. Watson, of the City Asylum, Winson Green, Birmingham; and to Dr. Powell White, of the General Hospital, Birmingham, for their kindness in supplying me with the material used in this research.

Birmingham.

THE DETECTION AND ESTIMATION OF IRON IN A MEASURED DROP OF BLOOD.

BY WILLIAM MACKIE, M.A., M.D. ABERD.

IN the year 1885, while I was working as a student in the laboratory of the late Professor Carnelley in Dundee, a method was being worked out at his suggestion by Dr. A. Thomson,[1] now of the Academy, Perth, for the estimation by calorimetry of "minute quantities of iron in the presence of large quantities of other metals and more especially in alloys." I had long been of opinion that this method might prove applicable to the estimation of iron in relatively small quantities of blood, but it is only within the last few months that I have found opportunity to ascertain for certain that it is so applicable. The general method is described in the *Journal of the Chemical Society* for 1885, p. 493. By it, according to Thomson, "it is possible to detect and estimate so small a quantity as 1 part of iron in 50,000,000 parts of water," and from repeated trials I am inclined to think he has rather under- than over-rated the delicacy of the test. The method depends on the well-known blood-red colour which soluble thiocyanates strike with persalts of iron. As the original paper may not be accessible to all readers of THE LANCET, and more particularly as the technique as applied to blood differs in several important respects from that detailed by Thomson, I had best describe the method in detail. The following reagents and special apparatus are required.

1. *A standard solution of a persalt of iron.*—This is best made by dissolving 0·1 gramme of pianoforte iron wire in a little iron-free hydrochloric acid, oxidising with a few drops of iron-free nitric acid, boiling for some time to drive off any great excess of acid, then diluting to 1 litre with distilled water; 1 c.c. of this solution contains 0·0001 gramme of iron. This is kept as stock solution, but for use it is still further diluted by making up 10 c.c. of this solution to 250 c.c., when 1 c.c. of the latter (or test solution) will contain 0·000004 gramme of iron. A little free acid in this solution is a desideratum rather than otherwise.

2. *Strong hydrochloric acid*, free from iron, arsenic, or other reducing substance. Thomson uses dilute acid (1 in 5), but considering the much smaller quantities of liquid operated on I find it more convenient to use a relatively smaller quantity of strong acid.

3. *A solution of potassium thiocyanate*, which need not be of any particular strength, but is conveniently made by dissolving 10 grains of the crystallised salt in 250 c.c. of distilled water.

4. *Two glass cylinders of the Nessler type* to hold about from 30 to 35 c.c. and graded at every 5 c.c.

5. *A shallow platinum dish.* The lid of a platinum crucible has been used in most of the analyses given below, but for convenience a dish of special pattern has been made for me by Hawksley, of Oxford-street.

6. *A platinum tipped forceps* to hold the platinum dish. If an iron forceps be used the greatest care must be exercised as an infinitesimally small flake of iron derived from the forceps may irretrievably vitiate the whole analysis.

7. *A special pipette graded to deliver 40 c.mm.* of blood. The particular number of c.mm. is immaterial if it be exactly known, but I have found that quantity very convenient to operate on and the strength of the test solution has been regulated accordingly.

8 In addition to the ordinary stock-in-trade of the chemical laboratory, such as curettes and measuring flasks, two special pipettes are necessary to deliver small but definite quantities of fluid. These may be conveniently made to deliver 0·5 c.c. and 1 c.c. respectively.

An analysis is made as follows: 40 c.mm. of blood are drawn up from a finger prick in the same way and subject to the same precautions as are laid down by Gowers for hæmocytometry or hæmoglobinometry. The blood is then delivered as evenly as possible over the bottom of the platinum dish, the last adhering portions of blood being carefully wiped from the end of the pipette against the vertical sides of the dish, which is then seized by its handle with the platinum-tipped forceps and held first at a distance above the Bunsen flame till the blood is quite dry. It is then gradually and carefully depressed into the flame and held there till every trace of organic matter is completely burned away and nothing but ash remains. From its viscidity blood shows little or no tendency to spurt, so that with care no loss need be anticipated from this source. This part of the process, however, does require some care, but proficiency is soon acquired, more particularly if one has had some previous experience in micro-chemical technique. The platinum dish is then allowed to cool, 0·5 c.c. of strong HCl is then delivered into it by the special pipette of that capacity, when it is again gently warmed to dissolve the iron in the ash. Special care must be taken at this stage to see that the acid reaches all portions of the ash. The contents are then washed into one of the cylinders, 1 c.c. of the thiocyanate solution added and the whole made up to about 15 c.c. with distilled water. The thiocyanate strikes a bright red colour with the iron and this colour is dark or faint according to the amount of iron present. We have now to ascertain the amount of iron which under like conditions will give a tint of equal intensity in an equal quantity of water in the other cylinder. To do this 5 c.c. of strong hydrochloric acid are added to it, 1 c.c. of thiocyanate solution, and the whole made up to 10 c.c. with distilled water. The standard iron solution is then run in from the burette till what is considered an equal tint is obtained, the tints being composed by looking down rather than through the cylinders. The quantities of liquid in the two cylinders are then equalised and any remaining deficiency of colour made up by the cautious addition of one or more drops of the standard solution. If the mark has been overstepped in matching the test solution a drop or two added to the iron solution will bring it up to the tint of the test solution and the quantity which has thus to be added to give equal tints subtracted from the quantity originally added to the test solution will give the quantity for equal tints. The strength of the solution and the quantity of blood taken have been so adjusted that the number of c.c. run in gives the amount of iron in grammes in 10,000 *measured* parts of blood; in other words the amount of iron that would be found to exist in 10 litres of the blood under examination. As an example, suppose that 6·1 c.c. have been required to give an equal tint with the iron in 40 c.mm. of blood. That is, 40 c.mm. contain 0·000004 × 6·1 grammes of iron; or 10 c.mm. contain 0·000001 × 6 1 grammes of iron; 1 c c. (1000 c.mm.) 0·00061 gramme; 1000 c.c. (1 litre) = 0·61 gramme; and

[8] Zeitschrift für Wissenschaftliche Mikroskopie, Band ix., 1893, S. 477.

[1] I find Professor T. S. Humpidge had used the method some months before, Proceedings Royal Society, 1885, vol. xxxix., p. 3.

10 litres = 6·1 grammes. An estimation from the initial drawing of the blood to the final calculation of hæmoglobin can be accomplished with the greatest of ease in fifteen minutes.

A considerable number of specimens of blood have been examined by this method and in a certain proportion of these cases the results have been checked by and compared with the situations of hæmoglobin as determined by Gowers' hæmoglobinometer. This test, such as it is, gives results which on the whole have been found to vary *pari passu* with the iron determinations. In a number of cases duplicate analyses have been made by the method now described and where this has been done the results have always closely agreed, there being seldom a difference of more than 0·2 c.c., and in a certain proportion of cases the results have been entirely concordant. The subjoined table shows parallel in columns the results obtained by this method and the results obtained in the same specimens of blood by Gowers' hæmoglobinometer, while in another column is given the absolute percentage of hæmoglobin as calculated from the iron found according to the equation 100 hæmoglobin = 0·43 iron (Hoppe Seyler).

No. of specimen.	Iron in 10,000 measured parts of blood or iron in grammes in 10 litres of blood.	Percentage of hæmoglobin relating to normal blood as estimated by Gowers' hæmoglobinometer.	Amount of hæmoglobin as calculated from iron found in absolute percentage of blood. 100 hæmoglobin = 0·43 iron.
		(About)	
1	6·5	65·0	15·2
2	5·3	55·0	12·4
3	8·1	90·0	18·9
4	5·8	68·0	13·5
5	8·5	84·0	19·8
6	7·1	72·0	16·5
7*	8·6	88·0	20·0
8	7·5	80·0	17·5
9†	3·7	40·0	8·6
10	4·4	56·0	10·3
11	5·2	65·0	12·1
12	4·9	60·0	11·4
Averages ...	6·3	68·4	14·7

* Highest determination. † Lowest determination.
From which hæmoglobinometer determination = iron determination × 10·85.
From which hæmoglobin in absolute percentage = iron determination × 2½ nearly.

From the average of these determinations it will be seen that the amount of iron found multiplied by about 11 (10·85) gives approximately the percentage of hæmoglobin as estimated by Gowers' hæmoglobinometer. It is natural to suppose, however, that the relation obtained here will be found to vary slightly for different observers, as hæmoglobinometry does not give results sufficiently precise to be free from the qualification of a decided personal equation. The average of all the determinations hitherto made on what may be regarded as specimens of healthy blood, amounting in all to 20, gives 6·1 for the iron. This would correspond to 14·2 per cent. of hæmoglobin. But this, it should be remembered, is subject to slight correction for the higher specific gravity of blood. Taking the average specific gravity as 1·055 we get 13·46 per cent. as the average percentage of hæmoglobin in blood weight for weight. Praeyer found 12·34 per cent., but at this distance I have been unable to ascertain either the method by which the iron was estimated or the number of analyses on which the average was taken. It is generally supposed that the total iron in the blood exists in combination as hæmoglobin. The following results seem to bear this out. A sample of the serum of horse blood as the average of four closely agreeing analyses, for each of which four times the quantity usually taken for a blood analysis was taken, gave 0·48 gramme of iron in 10 000 parts of serum. The same serum tested with the hæmoglobinometer required to be diluted 4·4 times—i.e., from the 20th to the 88th division line—to give the standard tint, from which it was inferred that the sample contained 4·4 per cent. of hæmoglobin—a result which conforms fairly closely to that given above as subsisting between the iron and the Gowers' determination.

I have as yet had no opportunity of applying the method to specimens of pathological blood, but here also I think we may reasonably hope that it will be found to bear out the results obtained by other methods and will prove of some clinical value. In addition to affording data for the direct estimation of hæmoglobin I am of opinion that with reliable reagents and where skilfully carried through it will give far more precise results than the methods of hæmoglobinometry now in use. It must be specially insisted on, however, that the reagents used are of the purest and the water distilled as for a Nessler determination. Contrary to the opinion expressed by Thomson as regards the effect of organic matter I find that some tap-waters and even the first collected portions of distilled water exercise a considerable reducing action and are found to discharge in greater or less degree the colour on which the reaction depends. This is, perhaps, more apparent when the method is applied for its present purpose, as the test solution is twenty-five times more dilute and the quantities of iron operated on much more minute than those contemplated in the original paper.

It must be evident that the method now described is equally applicable to the estimation of iron in other organic fluids, or starting gravimetrically that it may also be used to determine the amount of iron in the ash of minute portions of solid organic tissue. The special apparatus necessary for the process were made for me by Hawksley, of Oxford-street, W.

The application of the method to specimens of pathological blood gave the following results:—

(1) Case of Simple Anæmia.

	Iron.	Hæmoglobin by Gowers about	Hæmoglobin absolute.
May 31st	2·8	33 per cent.	6·5 per cent.
June 7th	3·2	38 „	7·5 „
June 14th	2·9	not estimated	6·8 „
June 29th	3·1	36 per cent.	7·2 „

The rather irregular increase of the iron is probably due to the fact that treatment had to be interrupted from time to time on account of irritability of stomach.

(2) Case of Chlorosis with Valvular Disease of the Heart.

	Iron.	Hæmoglobin of Gowers.	Hæmoglobin absolute.
May 30th	3·8	44 per cent.	8·9 per cent.
June 14th	3·4	50 „	7·9 „

This case was not under treatment at the time.

In addition to affording data for the direct estimation of hæmoglobin I am of opinion after six months' trial that with reliable reagents the method now described is likely to give far more precise and determinate results than the methods of hæmoglobinometry now in use. It must be specially insisted, however, that the reagents used must be of the purest and the water distilled as for a Nessler's determination of ammonia in potable waters; indeed, I have every reason to think that the method will prove as exact and determinate for the estimation of iron in blood as that process is for the estimation of ammonia in water. Since this method was worked out the description of a method by Dr. Jolles, of Vienna, for the estimation of iron in blood has come under my notice. The principle involved is the same but the mode of application is very different. His results, however, are very similar to those given above. From an average of ten determinations he finds the average percentage of hæmoglobin in blood after correcting each determination for specific gravity is 14·77 or considerably higher than the average given above. His highest individual determination is 17·14 per cent. after correction for specific gravity of blood. The highest of my results is 20 per cent., but this is uncorrected and would possibly be about 18·5 per cent. after correction. Jolles' lowest determination in anæmia is 4·33 iron, mine 2·8 in 10,000 parts. The results, however, are likely to prove of clinical value without correction for specific gravity.

It must be evident that the method above described is equally applicable—not so Jolles' as at present arranged—to the estimation of iron in other organic fluids, and starting gravimetrically that it may also be used to determine the amount of iron in the ash of minute portions of solid organic tissues.

The following among other results have been obtained in the case of organic fluids, from 100 c.mm. to 200 c.mm. being used for each determination:—(1) Serum (human) from

blister and as average of six determinations gave 12·5 iron per 1,000,000 parts of serum; (2) milk (cow's) as average of three determinations, 14·6 per 1,000,000; (3) a sample of sherry wine, 14 per 1,000,000; and (4) a sample of claret highly recommended for anæmics, 32 parts iron per 1,000,000 parts of wine.

Elgin.

A CASE OF MALTA FEVER IN WHICH THE DIAGNOSIS WAS CONFIRMED BY AGGLUTINATION OF THE MICROCOCCUS MELITENSIS.[1]

BY DR. R. KRETZ,

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THE clinical applications of the phenomena of agglutination undergo almost daily extension on account of the certainty and facility of the process, and whereas the serum reaction was originally regarded as a valuable means of distinguishing between different micro-organisms cultures of pathogenic bacteria are now employed as diagnostic tests which act by producing distinctive agglutinations with the blood serum obtained from patients. A case of this kind, in which the agglutination reaction was made use of for the diagnosis of an illness the clinical symptoms of which had entirely disappeared, will be briefly described in the following article. The patient was a young medical man in the Emperor Francis Joseph Hospital in Vienna; he had returned from the South in the beginning of the present year suffering severely from fever. The clinical history of the case, for my knowledge of which I am indebted to information kindly supplied by the patient and by Primarius-Docent Dr. Kovacs, presents a variety of characteristics and an abstract of it is accordingly given.

The medical man in question spent the winter of 1896–97 in Ajaccio as a travelling companion and about a week before his return to Austria he fell sick in the beginning of February, 1897, with high fever, headache, and debility. There were no shivering fits; the remissions of the fever and the highest points attained in the elevations of temperature, which took place almost every evening, were irregular. The bowels were for the most part confined. This feverish condition was occasionally attended with rheumatic symptoms and lasted till June. After several weeks' stay in the hospital a non-febrile period set in for the first time towards the end of June and was followed in July by a slight relapse, since which time the patient's health has remained good. Quinine, salicylic acid, and antipyrin had not any effect on the fever, but somewhat large doses of phenacetin seemed to produce subjective improvement and also to influence the course of the temperature. The illness was attended by emaciation and simple anæmia, symptoms which quickly disappeared after the cessation of the fever. The most remarkable feature of the case was the acute high fever, which lasted four months from the beginning of February with alternate remissions and somewhat prolonged exacerbations, but nevertheless was not attended by any positive clinical symptoms beyond enlargement of the spleen and a moderate amount of anæmia. There was a slight relapse which passed off without further incident and was followed by complete recovery. Typhus fever and malaria, which suggested themselves in the first stage of the illness, could be excluded without hesitation, neither could tuberculosis be admitted, for notwithstanding the long duration of the fever there was no clinical manifestation of this disease and as the case had terminated by complete recovery it seemed to remain undiagnosed.

Not long ago I had the opportunity of reading R. Bensaude's monograph on serum diagnosis, and his statements as to the possibility of recognising Malta fever by this method, as had in fact been done by Wright six months previously, induced me to try it in the present case. A sample of micrococcus Melitensis (Bruce), most kindly supplied from Kral's bacteriological laboratory, served as the test material.[2] This minute coccus, which Bruce in the year 1887 recognised as the cause of Malta fever and obtained in pure cultivation, produces a similar disease in the monkey; with the serum from a trial bleeding to which the convalescent had submitted some days before it now showed very distinct agglutination. The reaction not only took place quite promptly, but proved successful without much delay when the serum was diluted 300 times, all the micrococci being massed together in heaps; even when the blood was diluted 1000 times there was a formation of isolated heaps, a result which did not occur in a control experiment without the addition of serum. The micrococcus Melitensis did not agglutinate with samples of serum derived from other sources and the serum under examination gave next to no reaction with typhus bacilli and other pathogenic bacteria. Having regard to Wright's experiments, the very energetic action which the serum of the case now described exercised on the micrococcus Melitensis left no doubt that the illness had been Malta fever; moreover, the clinical symptoms, especially the course of the fever, agreed perfectly with the description which Bruce and other authors have given of this disease.

Malta fever is endemic not only in the island of Malta but in Gibraltar, Cyprus, Crete, and on the Mediterranean coasts; according to recent statements based principally on the application of serum diagnosis it is also endemic on the shores of the Indian Ocean. It likewise seems to occur on the coast of Dalmatia; at least, it happened four years ago that I made a post-mortem examination of a man who had arrived from the Brionian Islands, and although I did not at the time succeed in making a positive diagnosis the appearances nevertheless agreed perfectly with the descriptions of the post-mortem appearances in Malta fever, a disease, however, which is seldom fatal.[3] The agglutination phenomena obtained with the micrococcus Melitensis therefore constitute an accurate and easily applicable diagnostic means of identifying cases of Malta fever as well as of carefully studying the geographical distribution and epidemiological relations of this interesting infectious complaint.

Recent Literature of Malta Fever.

Bensaude, Le Sérodiagnostic (Les Phénomènes d'Agglutination des Microbes et ses applications à la Pathologie), Paris, 1897, Georges Carré et Naud. Bruce, Note on the Discovery of a Micro-organism in Malta Fever, The Practitioner, September, 1887. Bruce, Sur une nouvelle forme de Fièvre rencontrée sur les bords de la Mediterranée, Annales de l'Institut Pasteur, April, 1893. Hughes, Sur une forme de Fièvre fréquente sur les côtes de la Mediterranée, Annales de l'Institut Pasteur, August, 1893. Hughes, THE LANCET, July 25th, 1896. Scheube, Die Krankheiten der warmen Länder, Jena, 1896, G. Fischer. Wright and Semple, Employment of Dead Bacteria in Diagnosis of Typhoid and Malta Fever, Brit. Med. Jour., May 15th, 1897. Wright and Smith, On the Application of the Serum Test to the Differential Diagnosis of Typhoid and Malta Fever, THE LANCET, March 6th, 1897. Wright and Smith, On the Occurrence of Malta Fever in India, Brit. Med. Jour., April 10th, 1897. Synonyms for Malta Fever, according to B. Scheube: Malta typhus, Mediterranean fever, Gibraltar fever, Rock fever, Neapolitan fever, Gastric remittent fever, Bilious remittent fever, Gastro-bilious fever.

[1] Translated from the Wiener Klinische Wochenschrift, 1897, No. 49.

[2] Written information stated that it was derived from a culture sent to Kral by Professor A. E. Wright, of Netley, on May 18th, 1897.

[3] After drying a small portion of the spleen which had been preserved in alcohol I rubbed it up with bouillon; the fluid thus obtained, corresponding to a twenty-fold dilution, gave obvious although incomplete agglutination with the micrococcus Melitensis; a similarly hardened and treated spleen taken from quite a different class of case gave no reaction, but this reaction yields the best results only when combined with a control experiment. The spleen contained granular pigment of a colour varying from brown to brownish-black; there were no typhus bacilli or malaria parasites; it could not be precisely determined on section whether minute cocci were present or not.

HOSPITAL REFORM.—The first annual meeting of the Hospital Reform Association was held on Wednesday afternoon at the offices of the Medical Defence Union, King William-street, Dr. Ward Cousins presiding. Mr. Garrett Horder read the annual report which showed that the association had received but indifferent pecuniary support, but had been responsible for wide discussion of topics of the greatest professional interest. Mr. Garrett Horder submitted a scheme for the better administration of medical relief in the out-patient and casualty department of the hospitals, and after a brief discussion a committee was formed to inquire into the practicability of the scheme.

CREASOTE AND SOME OF ITS DERIVATIVES.

BY EDMOND CHAUMIER, M.D.

1. CREASOTE, which has long held a place among the most active medicaments, may justly be called a "marvellous" remedy in cases of pulmonary phthisis, yet in spite of this it must be admitted that side by side with many cures there is a certain number of failures on record. The importance which the condition of the atmosphere inhaled by the patient plays in the treatment of tuberculosis is only just beginning to be understood in France yet it is absolutely necessary to know that unless the tuberculous patient be submitted at the same time to an air cure, no creasote or other medicament will be efficacious. In hospitals pulmonary complications of a serious character, such as the spread of the pneumococci or staphyloccci of phthisis, rapidly supervene, and more deaths are attributable to those complications than to the original disease. It follows that before giving the patient creasote he should be placed in conditions favourable to his recovery by submitting him to the air-cure. It is not only in Mediterranean health resorts, but also in northern towns that this necessity arises. Bouchard and Burlureaux have proved that for really successful treatment large doses of creasote are required, and that the greater the quantity of the medicament which the patient can sustain the more chance there is of recovery. Leaving aside all preparations containing insufficient doses we may confine our attention to the quantity of creasote to be given and the best means of causing its absorption into the system. As to the latter four different channels are available—viz , the mouth, the rectum, the trachea (by means of injection), and the skin.

The most convenient forms in which to administer creasote by the mouth are pills and solution in cod-liver oil, and in either of these forms the dose may be as much as 30 grains or even more per day. In many cases, however, doses of not more than 3 grains cause indigestion and, as every physician knows, a tuberculous patient should above all else be kept free from disturbance of his digestive functions. It has been proved by Hagem and Renaut that cases of dyspepsia and inflammation of the stomach occurring in phthisical patients were due only to the use of creasote and guaiacol. Patients who in the first stages of the treatment readily support doses of thirty grains of creasote gradually become unable to tolerate the medicament, and very few are able to continue the treatment until complete recovery is secured. It often happens that the patient has to abandon this course of treatment at the moment when a complete cure seems to be in sight.

Injection by the rectum would seem to be an improved method of administration, but, as a matter of fact, it is not; the rectum is less able to tolerate the remedy than the stomach, and after a very few days the patient loses control of the bowel and is frequently attacked by colic and diarrhœa. The injection of oil of creasote in the trachea does not appear to be practical; moreover, the larynx and the bronchial tubes would probably tolerate the medicament as little as the rectum and the stomach. Burlureaux has in some cases obtained excellent results with subcutaneous injections of oil of creasote, but few patients would willingly submit to daily punctures and incur the risk of abscesses or gangrene. As creasote is a poisonous substance, the injection of the large doses prescribed by Burlureaux (from 150 to 230 grains per day) may produce excessive perspiration, coma, or symptoms of meningitis and diuresis. Notwithstanding all these objections creasote was until the last few years the only remedy for which it could be claimed that it had effected a certain number of cures. We will pass over the injection of oil of creasote into the pulmonary tissue, but it should be mentioned that in other cases there are numerous instances on record where the creasote treatment has been successful, such as the application of oil of creasote in the form of compresses to tuberculous and other wounds; intra-uterine after curetting with creasoted glycerine; the treatment of certain skin diseases with creasote; and intra-urethral injections of creasote in blennorrhœa.

2 Guaiacol, which for some time received much praise no longer holds its own. It was thought to be the active principle of creasote, and it was believed that as such it could replace the latter, but its use, either by the mouth or as a hypodermic injection (in oily solution), has not been attended with satisfactory results. On the contrary, it has frequently caused local complaints, pain, indurations, boils, abscesses, &c. Guaiacol, while possessing all the disadvantages of creasote, is in no way superior to the latter, and at present it is more and more discarded, being now only applied as a remedy to rub into the skin as a fever alleviant and on a bandage on wounds to produce anæsthesia It possesses no doubt antipyretic qualities, but the reduction of the temperature is of short duration and may be followed by excessive perspiration, collapse, or at least fainting, giddiness and nausea. Owing to these various drawbacks guaiacol does not rank among the more important antipyretics. As an analgesic, although inferior to cocaine, it may be found useful as it can be left without risk to be handled by the patient and it may also be found serviceable in skin diseases, particularly lupus, and as a dressing for wounds.

3. So recently as 1892 creasotal was still considered a curiosity of the laboratory. Its existence was communicated to me by one of my friends, an expert in chemistry, at a time when I was endeavouring to find a remedy for phthisis easily administered to children. Creasotal being a neutral carbonate of creasote, I assumed that it might be found useful, but I had great trouble in procuring it, and only after a long correspondence with Dr. Von Heyden, in whose laboratory it had been discovered, the latter agreed to have some creasotal made for my experiments. As soon as I had carried out my tests I made it known that creasotal was destined to supersede creasote and my prediction is now almost an accomplished fact. The result of my researches has been communicated to the Academy of Medicine, the Congress of Tuberculosis, the Association for the Advancement of Science and the International Medical Congress at Rome. In every country my experience has been put to the test and numerous observations by physicians have been published everywhere. They all agree that creasotal is a medicament as efficacious in the treatment of tuberculosis as creasote but without the latter's objectionable qualities. Like creasote it increases the appetite, diminishes the cough, facilitates nutrition, and stimulates the increase in weight. Its advantages over creasote are that it can be used indefinitely without causing any gastro-intestinal troubles.

Creasotal is a compound in the form of a carbonate of all the substances found in creasote. In the digestive organs, and particularly in the intestines, it splits up into creasote and carbonic acid. This process takes place slowly and the creasote set free is absorbed, as and when generated over the whole length of the intestinal canal. On account of this property creasotal should be given as an intestinal antiseptic in cases of typhoid and puerperal fevers. Creasotal is a viscous liquid, which, however, can be made fluid by means of a hot-water bath. It has a very slight tarry taste; its oiliness is too slight to form an objection. When weak doses are required it can be given in the form of capsules of seven and a half grains. I myself, however, prefer strong doses, and therefore use pure creasotal by teaspoonfuls. Most patients will take it readily in that form, but with some it has to be covered by means of jam or even given in wafers. It can also be given in the form of a solution with oil, in emulsion with the yelk of eggs or mucilage of acacia or mixed with a light claret or hot milk, but I prescribe it by preference in the pure state. With creasotal it is possible to proceed to a thorough course of creasote-therapy. The maximum doses of Burlureaux can be exceeded without risk and such doses can be taken by the mouth In exceptional cases creasotal can be injected subcutaneously. For this purpose I use pure creasotal previously warmed. Doses of 75 grains can thus be injected morning and night. The injections can also be administered by the rectum either as pure creasotal or as an emulsion made with the yelk of an egg. When the patient takes creasotal internally by the mouth which is the method to be preferred, I give a teaspoonful morning and night for adults or in some cases even three times a day. For children under ten years of age the maximum should be two teaspoonfuls per diem and under that age I give only half doses. The above doses have been found acceptable by practitioners generally. During the year 1897 I used creasotal and guaiacol carbonate as a pulmonary antiseptic in

cases of ordinary bronchitis and intend to publish a treatise on this subject shortly. As a large proportion of the creasotal is eliminated in the urine (which is shown by the odour and the dark colour of the urine of many patients) I believe that it can with advantage be used, like salol, as an antiseptic of the urinary canal. I have used it in blennorrhœa, but further experiments are necessary in all cases of urinary infections. In two cases of incontinence of urine in children, the administration of creasotal has, within my knowledge, effected a cure but in other cases I have had no success. For dressing wounds and for treatment of tuberculous or osseous affections, or those of the nerve tissue, the use of creasotal can strongly be recommended as an injection around or into the diseased tissues in the place of the chloride of zinc recommended by Lannelongue. It must be admitted that the odour of creasote given off by the patient under treatment with creasotal is a disadvantage, but this, after all, is only very slight. As contra-indicated, I only know of fever and diarrhœa. Some practitioners recommend the use of creasote and creasotal in cases of fever, but I do not agree with them.

4. Guaiacol-carbonate is a dry, white, crystalline substance; it is used in the form of powder, sometimes as a wafer, sometimes in solution. The dose most generally adopted is 75 grains per day for adults, but this can be largely exceeded without risk. Like creasotal, guaiacol-carbonate dissolves in the digestive organs and is not more irritant than creasotal. It has given excellent results in medical practice, particularly abroad; I use it sometimes but much prefer creasotal. Still guaiacol-carbonate should not be discarded as a therapeutic agent. In a prolonged illness like tuberculosis the patient frequently objects to taking continually the same remedy and there will then be no objection to replacing for a time the creasotal by guaiacol-carbonate. In affections other than tuberculosis, guaiacol-carbonate has been strongly recommended for typhoid fever; and, according to Hölscher, even puerperal fever can be treated successfully with it. This medicament will also be found useful as a dressing and in many cases can replace iodoform for this purpose. I have tried other derivatives of creasote such as oleo-creasote, benzoate of creasote, and phosphate of guaiacol; but all these remedies are very rarely employed although some could be made to render certain services.

Tours, France.

DISTEMPER AS A CAUSE OF PUERPERAL FEVER.

BY OCTAVIUS BEVEN, M.D., B.S. DURH., M.R.C.S. ENG., L.R.C.P. LOND.

IN THE LANCET of July 31st, 1897, on page 296, there is a letter from Dr. F. W. Mann on the pathology of distemper. He thinks that "distemper in the dog is only a stage in the life history of the organisms of scarlet fever and diphtheria." That the virus of distemper may be directly contagious to human beings, provided there is a suitable nidus, is, I think, at least suggested by the following case.

On March 7th, 1897, I was summoned by a kennelman to attend his wife during her confinement. On driving to his cottage, which adjoins the kennels, he informed me that he had a number of dogs suffering from distemper. One or two of them were very ill, requiring his constant attention night and day, so that he had not been able to take off his clothes for some days. He described the discharge from their nostrils as "simply tremendous." Having to feed them on raw eggs, brandy, &c., he was necessarily brought into very intimate contact with them. Arriving at his cottage I proceeded upstairs to find that his wife had been delivered of a male child about a quarter of an hour before my arrival; the next pain expelled the placenta, there was very little bleeding and the perineum was intact, this being her eleventh child. On visiting her the following day she said she had passed a good night and felt quite comfortable. Seeing her again on March 9th (the third day) she was still very comfortable, the temperature and pulse were normal and the lochia were perfectly sweet. She was not seen again till March 11th (the fifth day) when her condition was found to be far from satisfactory. She was then very restless, her temperature, taken by the mouth, was 104·2° F., her pulse was 132, and her tongue was dry. The nurse said that she had apparently been perfectly well up to the preceding evening (the 10th) when she had a shivering fit and then passed a very restless night. The abdomen was perfectly flaccid and there was no tenderness on manipulating the uterus; there was no enlargement of the spleen and the lochia were of good colour and perfectly sweet. On vaginal examination the os uteri was found to be normal. There was slight constipation and the milk was flowing freely. Thorough syringing with Condy's fluid and water was performed, a saline purge administered, and a mixture containing five grains of sulphate of quinine and fifteen grains of bromide of potassium to the dose ordered every four hours. The syringing was directed to be repeated three times a day. On inquiring of the nurse it was ascertained that the husband came from the kennels contrary to instructions on the afternoon of the 9th to see his wife, sitting with her during the evening and sleeping on the bed by her side during the night. The patient was now seen every day, her temperature keeping about 104° for the first three days and then fluctuating in twenty-four hours between 100° and 102°, sometimes higher in the evening and sometimes in the morning. Her pulse dropped to 112, at about which rate it remained throughout. She was kept on the quinine mixture for twelve days, it having to be stopped on account of the difficulty of administration. Her tongue got very dry and glazed; the bowels acted regularly and the motions were good. Milk, beef-tea, eggs, brandy, &c., were taken well. She continued in much the same condition for sixteen days, being delirious at night; her delirium then took on a low muttering form, difficulty was experienced in getting her to take nourishment, and she gradually sank and died on the 26th, the twentieth day after her confinement. I very much regret that I was not allowed to make a post-mortem examination.

Remarks.—The patient had always been a very delicate and anæmic woman and since her last confinement she had been under treatment for two months for anæmia. She had in her previous confinements been attended by a midwife and had always had a prolonged convalescence. It will be noted that the pyrexia was the only reason for calling the condition puerperal fever, not one of the other symptoms being present. It was in fact a fever occurring during the puerperal state. On the afternoon of March 9th the husband was with his wife and on the evening of the 10th the patient had her first rigor. Throughout the whole course of the illness the abdomen remained flaccid, manipulation of the uterus caused no discomfort, the lochia were normal, and the bowels regular. The case appeared therefore to be one of pyrexia only. The drainage of the cottage and the kennels was declared by the medical officer of health to be perfect. There was no history of the nurse having been near a woman suffering from puerperal fever. No cases of typhoid fever had occurred for some time within a radius of six miles. The kennels are situated right away from any houses. I should not like to assert that this was a case of puerperal fever caused by the organisms of distemper, but I think that the clinical history rather supports that view.

Edwinstowe, Newark, Notts.

A CASE OF JEALOUSY.

BY WILLIAM O'NEILL, M.D. ABERD., M.R.C.P. LOND.,
LATE PHYSICIAN TO THE LINCOLN GENERAL DISPENSARY AND TO THE LINCOLN LUNATIC HOSPITAL.

AMONG the multitudinous and multifarious cases of disease reported year after year in the columns of THE LANCET I have not seen a case of that very old and commonplace complaint, jealousy—or "spirit of jealousy," as it is named in the Scriptures, where it is fully described and treated. I would therefore ask permission to mention a case of it that has come under my observation.

Some years ago I was requested to visit a lady who it was represented to me was very ill and who consequently required immediate attention. On entering the house I was shown into the so-called sick-room in which there were three persons all of whom seemed to me to be in good health. There were present an old lady (the owner of the house) and her daughter, who had arrived a few days previously from a neighbouring

county to spend two or three weeks with her mother, and the daughter's husband, whose visit was only to be for a day or two. The man was about thirty-five years of age, small in stature, swarthy in complexion, and plain-looking. The wife was a striking contrast to her husband; she was rather tall, remarkably fair and handsome, and was a few years younger than her good man. After taking a seat I asked which of them was the patient, but no answer having been given to my inquiry I asked again. Then the younger lady with some hesitation said: "I am the patient and my complaint is jealousy. I am jealous of my husband and if you do not give me something to relieve me I shall go out of my mind." This accusation against the little man seemed to me to be most ridiculous; indeed, I could not help thinking that if the accuser had been the accused it would have been more in the nature of things. I assured the lady I was extremely sorry for her, the more so that I was quite incompetent to treat such a case. However, I advised that a wise mutual friend should be consulted who would make things pleasant between husband and wife, for that in all probability there were no grounds for her suspicions. The husband protested his innocence and declared there was no cause whatever for her accusations. The wife persisted in reiterating them and so the wrangle went on till suddenly she fell from her chair on the floor in a fit the spasmodic movements of which were so strange and varied that it would be almost impossible to describe them. At one moment the patient was extended at full length with her body arched forwards in a state of opisthotonos. The next minute she was in a sitting position with the legs drawn up, making while her hands clutched her throat a guttural noise. Then she would throw herself on her back and thrust her arms and legs about to the no small danger of those around her. Then becoming comparatively quiet and supine she would quiver all over while her eyelids trembled with great rapidity. This state perhaps would be followed by general convulsive movements in which she would put herself into the most grotesque postures and make the most unlovely grimaces. At last the fit ended, and exhausted and in tears she was put to bed. The patient was a lithe, muscular woman and to restrain her movements during the attack with the assistance at hand was a matter of impossibility, so all that could be done was to prevent her injuring herself and to sprinkle her freely with cold water. The after-treatment was more geographical than medical. The husband ceased doing business in a certain town where the object of his wife's suspicions lived. He was enabled to do so by the kindness of a friend who exchanged part of his district with him.

This was not a case of epilepsy, for the muscular spasms of the patient were not exactly similar to those of that disease. Besides there was no foaming at the mouth or biting of the tongue and consciousness was not, I think, at any time fully at abeyance as is the case in epilepsy. The attack was a well-developed hysterical fit with a good deal of cataleptic rigidity of the muscles. The fit was not the disease, but it was the symptom or manifestation of a mind diseased or deranged, the state of the mind being the result of the woman's broodings over her real or imaginary wrongs. When the mind of a sensitive person is fixed on an all-absorbing subject like that of jealousy it may become unhinged and when this is the case the brain may I think occasionally relieve itself by explosions of more or less incontrollable and misdirected muscular energy. It lets off steam and perhaps prevents the boiler from bursting. But jealousy frequently assumes a violent and destructive character, for as the wisest of the sons of men says: "Jealousy is cruel as the grave; the coals thereof are coals of fire which hath a most vehement flame." Not long after the above case came under my notice I read in the *Standard* newspaper an account of three murders each of which was attributed to jealousy.

Again, jealousy in an inobtrusive form may be found influencing the course of many diseases and sometimes it may take such a deep hold on the mind of a patient that it may be considered the disease itself. It is not often, however, that a female patient will reveal to a third person the cause of her mental depression, loss of sleep and appetite, and her unwillingness to leave her room and resume outdoor exercise. A husband may throw some light on a case that is making little or no progress towards recovery. I have had cases illustrative of this kind of jealousy and have had one lately and this I know that in treating them a man requires to be a diplomatist as well as a physician.

Lincoln.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

A CASE OF SPREADING TRAUMATIC GANGRENE.

(Under the care of Mr. W. EVANS.)

FEW diseases possess more symptoms than does spreading traumatic gangrene. The time of onset of the gangrene and the rapidity of its progress are very striking, but the characteristic by which it is most readily recognised is the subcutaneous development of gas. In its symptoms the case narrated below was very typical but the micro-organism which was found in the affected tissues in this case was different from that usually described. The question of the form of bacterium present in most cases of acute spreading gangrene was settled by Chauveau and Arloing in 1884.[1] They showed that the organism was the "vibrion septique" of Pasteur, or as it is usually called now the bacillus œdematis maligni. There can be no doubt that this bacillus is the cause of the disease in nearly all cases, but other organisms have been described. Wicklein[2] found in three cases a bacillus differing in several points from the bacillus œdematis maligni. Bunge[3] discovered the bacillus coli communis in a case of this disease, and this bacillus was also present in the following example of spreading traumatic gangrene. The desirability of amputating through tissues already infected is doubted by many, but cases certainly do occur in which recovery follows, even though it has not been possible to remove by amputation the whole of the diseased structures, as shown by the presence of the emphysema beyond the site of operation, and especially is this true of the upper limb.[4] We are indebted to Mr. H. J. Walker for the notes of this case.

A boy, aged nine years, was brought to the Royal Free Hospital on Aug. 27th, 1897, suffering from a fracture of the radius and ulna of the right forearm; he also had a small punctured wound which did not extend down to the fracture. The whole arm at the same time was covered with dirt from the road. The boy was immediately put under an anæsthetic and Mr. Walker enlarged the wound and syringed it out with carbolic lotion (1 in 20), and then dressed it with cyanide gauze soaked in carbolic lotion (1 in 40); anterior and posterior splints were then applied and the arm was put in a sling and the boy sent home. The next day (the 28th) the patient came up to the hospital and said that he felt no pain and that the arm was quite comfortable. The fingers were not swollen or in the least blue. The same night the arm commenced to pain him slightly and his mother said he was rather delirious. The next morning (the 29th) the boy was brought up to the hospital with his arm almost black from the finger tips to the shoulder, covered with blisters, and emitting a foul odour. The whole arm was emphysematous and the emphysema extended as far as the lower part of the neck of the same side. The patient was at once admitted; his temperature was found to be 102·4° F., but he suffered no pain and there were no marked constitutional symptoms. Shortly after admission the case was seen by Mr. Evans, who amputated at the shoulder-joint, but it was considered almost hopeless as the discolouration extended beyond the site of amputation. On the night of the operation the temperature fell to 99·2° and the patient was ordered five grains of quinine every six hours. He did not sleep well, vomited three times, but took milk, soda-water, and beef-tea well. At 6 A.M. on the 30th his temperature rose to 102·2° and the discolouration of skin and emphysema were found to be extending up the right side of the neck and down the right side of the

[1] Étude Expérimentale sur la Septicémie Gangreneuse, Bulletin de l'Académie de Médecine, vol. xiii., p. 604.
[2] Centralblatt für Chirurgie, Jan. 26th, 1893.
[3] La Tribune Médicale, Nov. 28th, 1894.
[4] Erichsen: Science and Art of Surgery. Tenth edition. Vol. I., p. 938.

chest. All day he was slightly delirious; his temperature did not rise above 101°, but he vomited after taking anything by the mouth. In the night he gradually became worse, vomiting all food when fed by the mouth. Anti-streptococcic serum (30 c.c.) was injected subcutaneously at 12.30 P.M. The temperature in the night was 100°, the pulse was 160, and the respirations were 48. On the 31st the patient was much worse, the discolouration and emphysema had extended over the middle line to the left side of the sternum and almost to the lower margin of the ribs. Anti-streptococcic serum was again injected, but with no beneficial result. He did not regain consciousness during the day and finally died at 3 5 A.M. on Sept. 1st. On bacteriological examination of this case coverglass preparations and cultures from the intermuscular spaces of the amputated limb showed numerous specimens of a bacillus which proved to be the bacillus coli communis.

HULL ROYAL INFIRMARY.

A CASE OF HERNIA OF THE BLADDER.

(Under the care of Mr. HENRY THOMPSON.)

A MAN, forty-eight years of age, was admitted into the Hull Royal Infirmary on Oct. 19th, 1896, for double hernia. It was difficult to learn much from the patient about the ruptures, but he seems to have had a reducible hernia on the right side for twenty-three years; all that could be learned of the rupture on the left side was that he had had it for "a many years." He appears to have had no pain or trouble with either hernia until he began to wear a truss two or three years before admission which seems to have caused him a great deal of pain. On Oct. 8th the left hernia became irreducible and at the same time there was increased frequency of micturition but no vomiting. On the 19 h he was admitted in order to have a double radical cure performed. The hernia on the right side was a femoral hernia of moderate size. Before the operation it was suggested by the house surgeon, Mr. Hainworth, that the frequency of micturition pointed to the presence of the bladder in the hernia on the left side. The operation took place on the 21st. On the right side the sac of the femoral hernia was separated from the surrounding structures and sewn in the ring, the redundant portion being cut away. The inner edge of the ring and the fascia over the pectineus muscle were then stitched together. On the left side a semi-lunar incision was made over the external abdominal ring and a firm semi-elastic swelling was found which greatly resembled a dense omental hernia. The dissection was continued and after cutting through at least half an inch of dense muscular and fibrous tissue a viscus was opened; it was lined with mucous membrane arranged in rugæ, and on examination it proved to be a pouch of the bladder, for a catheter introduced per urethram was made to project through the wound. The opening into the bladder was at first stitched up, but the attempt to separate it from the surrounding structures in order to return it into the abdomen caused the walls of the bladder to tear, so a serre-nœud was passed round and the projecting portion was cut off. The stump was then covered with tannin and iodoform and the skin-flap was loosely stitched over it. The aperture through the abdominal wall appeared to be in the position of a direct inguinal hernia. The patient passed urine about two hours after the operation and was instructed to do so frequently. The serre-nœud was tightened up daily. The urine contained a little blood for a day or two and the patient did well except for severe vomiting, which caused rectal feeding to be adopted on the 25th. The vomiting then ceased immediately and the wound on the right side was healed by the 26th, but on the left side there was a little sloughing, although the discharge was quite sweet. On the 30th the screw of the serre-nœud broke while being turned and urine began to ooze from the wound. By Nov. 2nd urine was being discharged freely from the wound and the next day a catheter was tied in the bladder. The quantity of urine escaping through the wound diminished especially after the application of an elastic bandage and pad to the part, and by Nov. 26th all the urine came by the urethra. The patient was discharged on Dec. 9th with a small portion of the wound still unhealed.

Remarks by Mr. THOMPSON.—In an admirable article on Wounds of the Bladder in Operations for Hernia by Farquhar Curtis, published in the "Annals of Surgery," in 1896, I find that as early as 1769 Verdin published a treatise on "Hernia of the Urinary Bladder," which still remains one of the classics on the subject. From that date to almost the present time this variety of hernia has been considered a rarity and hence of little practical interest, but within the last few years numerous cases in which the bladder has been wounded during the operation for a radical cure have been recorded. The reason for the great increase in the frequency of this accident is undoubtedly to be sought in the altered methods of operating for hernia. In the old operation of herniotomy, consisting of a simple incision of the hernial ring, the bladder was not exposed to injury even if it were prolapsed and was not likely to be discovered even if it were injured unless very conspicuous. But the attempt to effect a radical cure now made even in cases operated upon primarily because they are strangulated necessitates complete dissection of the neck at least in order to ligate it, and if the hernia is in close relation with the bladder the latter is more likely to be discovered even if not wounded. As a rule the protruding portion of the bladder is so attenuated and altered that its recognition has sometimes been a matter of difficulty even after it has been opened and the surgeon has passed his finger into it, but in my case, instead of being attenuated, the walls of the protruding portion were enormously thickened, so much so that I do not exaggerate when I say that they were half an inch thick. This was the chief reason why I decided to remove the projecting portion as in the process of dissecting down so as to make out what was the nature of the tumour I more or less damaged its walls and the thickness thereof was so great that I felt I could not successfully stitch up the aperture.

The bladder may be involved in hernia in at least three different ways. The first and most common is the prolapse of a portion of the organ which is entirely extra-peritoneal either with or without a hernia of the bowel accompanying it. Two-thirds of the cases recorded are of this variety. Secondly, there may be a hernia of an intra-peritoneal portion of the bladder. About one-twelfth are of this variety. Lastly, there may be a hernia of both intra- and extra-peritoneal portions of the bladder; one quarter of the cases are of this variety. Of the cases recorded by Curtis one-fifth have been found in femoral herniæ.

As to the cause little is known except those general facts which apply to all herniæ, but it is especially to be noted how many of the recorded cases have occurred in herniæ which have relapsed after attempts at radical cure and which may be explained by the fact that in the operation it is customary to pull the sac well down when ligating it in order to secure a smooth internal surface for the peritoneal cavity, and this traction may certainly predispose it to descend if that portion of the peritoneum were further drawn upon to make a sac for the recurrent hernia.

The diagnosis has seldom been made in the recorded cases before the operation although certain symptoms such as my patient complained of may awaken a suspicion as it did in my case. When I mention that such men as Howse, Roux, Berger, Israel, Boeckel, Gueillot, Polaillon, Championnière and Thomas have incised the bladder before realising its presence some excuse may be afforded for any surgeon who happens to do so. The chief symptoms are difficulties in micturition, passing attacks of retention, alteration in size of the tumour during urination, vesical tenesmus, and the urine may show signs of inflammation. If strangulation occurs there is ordinarily no difference from the usual clinical symptoms of strangulated hernia.

If the bladder has been recognised before it has been injured it should of course be freed and reduced, the ring being closed as usual by sutures. In my case, however, even if I had not opened the bladder this would have been impossible owing to the enormously thickened and adherent walls. If reduction cannot be effected the surgeon must either leave things *in statu quo* or invert the protruded bladder and close the aperture with sutures. When the bladder has been wounded three methods of treatment may be adopted—the open method, treatment by ligature or by suture. By the open method, 3 out of 8 died; by the ligature, 3 out of 11 died; and by the suture, out of 18 cases 12 got primary union, 3 died, and only one was followed by a permanent fistula. Taking all the cases together in which the bladder was injured—namely, 41—11, that is 25 per cent., ended fatally, but in 3 of the fatal cases death was independent of the vesical injury.

KASHMIR MISSION HOSPITAL.

A CASE OF CARCINOMA OF THE RECTUM; EXCISION; RECOVERY.

(Under the care of Mr. ARTHUR NEVE.)

THE following case is of interest as showing that in some respects the perineal operation of proctectomy is more easily performed in women, especially in multiparæ, than in men, but it must not be forgotten that, as Allingham[1] has pointed out, the peritoneum descends lower in the female than in the male; in the former it is frequently less than 3 in. from the anus, while in men 3½ in. to 4 in. from the anus is the common site for the reflection of the serous membrane. The mortality of the operation is high; it has been given by Butlin[2] as 35 per cent., and by Ball as 16 5 per cent.; the one is probably too high and the other too low.

A Punjabi woman, servant in the family of a distinguished officer, had been ailing for some months but had had great increase of pain since a fall fifteen days before. She was admitted on June 7th, 1895. She appeared to be over fifty years of age and was exceedingly feeble. Much pain was complained of and there were frequent motions with much straining. Blood, mucus, and pus were passed. On digital examination a tumour could be felt on the posterior aspect of the rectum extending from near the sphincter for a finger's length upwards. Laterally it measured about two and a half inches in diameter. There was a considerable amount of thickening extending upwards with an ulcerated centre. Owing to the comparative accessibility of the parts in a multipara Mr. Neve decided to excise by the perineum. The operation was performed on June 13th with the assistance of Dr. Ashton and Dr. M'Culloch. The usual lithotomy position was employed. The anus was widely dilated. An incision was carried outside the sphincter for the posterior two-thirds of its circumference and continued back to the coccyx and a little up on the right side. The tissues were rapidly separated in front and on the left side cutting where necessary with scissors; pressure forceps were left on the bleeding points. Separation was then effected on the right side to a point level with the upper limit of the tumour. Thus a strip of the anterior surface of the rectum was left continuous with the sphincter. The attachments of the tumour above proved too dense for the écraseur, so they were cut through with scissors as high as the third sacral vertebra. The incision seemed to go through tissue infiltrated by carcinoma, as proved to be the case when the part removed was examined by Stiles' method. Mr. Neve cut away some nodules that were within reach and also a gland the size of a marble. The pelvis could now be easily explored as the gap admitted the whole hand. A strong solution of chloride of zinc was applied to the raw surface and the wound was packed with gauze, a glass tube having been inserted in the bowel, several pairs of pressure forceps remaining *in situ* till next day. The loss of blood had been considerable. The progress of the case was uneventful. On the following day the stuffing was removed. Fæces collected in the wound and had to be daily cleared out by syringing with dilute creolin lotion. Ten days later the cavity was fast closing and the wound towards the coccyx narrowing. On July 13th, a month after the operation, the patient was able to get about the ward and the wound was closed. She returned to her mistress in August and in the winter obtained employment elsewhere. When heard of she was said to be fairly well and at work (April, 1897).

Remarks by Mr. NEVE.—The relief given to the patient by this operation was very striking. At the time I did not consider that the disease was eradicated and the history is not sufficiently complete to prove that it had been. At the operation the view of, and access to, the diseased parts was all I could wish for. To have performed Kraske's operation would have been needlessly severe and would scarcely have afforded any better chance of extirpating the disease. In this case it was not necessary to open the peritoneal cavity. The infiltration was all posterior with dense periosteal adhesions to the sacrum. Had the patient been a man it would not have been possible to have removed so much through a perineal incision. It is in males and in cases where the tumour is situated anteriorly, or where the peritoneal cavity has to be opened and the whole rectum drawn down, that Kraske's operation is serviceable.

[1] International Encyclopædia of Surgery, vol. vi., p. 122.
[2] Operative Surgery of Malignant Disease, p. 241.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Cyst of a Sudoriparous Gland.—Blood in Pemphigus.—Intestine from Case of Strangulation.—Appendicitis.—Abscess of the Suprarenal Body.—Meckel's Diverticulum.—Anomalous Aorta.

A MEETING of this society was held on Jan. 18th, the President, Dr. PAYNE, being in the chair.

Mr. BETHAM ROBINSON showed a Cyst of a Sudoriparous Gland with Papilliferous Ingrowths removed from the axilla of a girl thirteen years of age. The cyst was about one and a half inches across, translucent, and had only been noticed a short time before. It was excised and was found to contain clear fluid with no trace of sebaceous material. It was situated in the corium. The wall consisted of fibrous tissue with a lining of flattened epithelium. Projecting from the wall were several papillary ingrowths, which were covered by columnar epithelium. He could find no record of a cyst of this nature reaching such a size.

Dr. J. H. DRYSDALE showed microscopic specimens of the Blood from a case of Pemphigus taken twenty-four hours after the eruption of a fresh crop of bullæ. The blood showed some paucity of red cells and a remarkable number of eosinophile cells. Out of the leucocytes present no fewer than 69 per cent. were of this nature. Ten days later, when a fresh specimen of the blood was examined, there were only 8 per cent. Increase of eosinophile cells was met with in many skin diseases and in cases of bone disease, &c., but it was rarely that the percentage rose above 20. Kanthack had described as many as from 30 to 50 per cent. in cases of pemphigus and a high percentage had also been met with in trichinosis.—Dr. GALLOWAY said that the hopes which had been entertained when the association of eosinophilia with pemphigus was first observed that it might serve as a diagnostic criterion had not been realised as a similar condition obtained in other forms of skin disease and in the fluid from ordinary blisters.—Dr. ARTHUR WHITFIELD said that the eosinophile cells, although present in cases of dermatitis herpetiformis and hydroa gestationis, did not occur in such large numbers, nor were they as numerous in blisters in healthy persons.—Dr. LAZARUS-BARLOW said that it had been questioned whether the cells in such cases as this were true eosinophile cells. He was inclined to think that they were. He thought that the numbers of these cells in a blister depended on the state of health at the time. In pemphigus the attacks usually occurred when the patient was out of health.—The PRESIDENT said with reference to Dr. Lazarus-Barlow's remarks that it was interesting to note that Sir James Paget in his early papers on Inflammation drew attention to the difference in the nature of the fluid in blisters according to the patient's state of health and even with the imperfect methods available he had noted the "corpuscular" character of the fibrin obtained or, as we should say, the number of leucocytes.

Mr. WALLIS showed a piece of Intestine removed successfully in a case in which an artificial anus had been formed at an operation for the relief of intestinal obstruction due to a cicatricial band. As the artificial anus, which was in the small intestine, could not be induced to close by ordinary procedures he resected about seven inches of the gut with a perfectly satisfactory result. The specimen showed the small amount of adhesion which had taken place between the bowel and the skin and it also showed that there was a good deal of fatty degeneration of the intestinal wall at the point of apposition.—Mr. WALLIS also showed the Inflamed Appendix from a Case of Acute Appendicitis removed forty-eight hours after the onset of symptoms, which were due to an abscess at its root.

Mr. ALEXANDER FOULERTON showed a Dilated Appendix which had given rise to no symptoms and was discovered accidentally during an operation for extra-uterine gestation.

Dr. A. W. ADDINSELL showed a specimen of an Abscess of the Suprarenal Body removed from a man twenty-eight years of age. He came under observation suffering from appendicitis which was followed by symptoms of general peritonitis. The symptoms referable to these conditions were subsiding when he began to have rises of temperature with several rigors. This was believed to be due to a return of Malta fever from which he had previously suffered severely. The only point against this view was the remarkably good

pulse. After death no pus was found in the appendix and there was no pus in the peritoneal cavity, but an abscess of the size of a Tangerine orange was found in the left suprarenal body. It contained true pus and not softened caseous material. It was examined for tubercle bacillus with a negative result. There was no sign of tubercle or of pyæmic processes in any part of the body. There was, however, a strong family history of tubercle, one aunt having died from phthisis and another from typical Addison's disease, and a child of the patient showed signs of tuberculous disease, and he could not help thinking that it might have been the cause of the abscess in this case. He did not regard it as having any connexion with the appendicitis. The effect of extracts of the suprarenal body in causing a rise of arterial tension was well known, and he thought that the good quality of the pulse, which was so much at variance with his general condition, might have been due to an increased internal secretion by the gland in the early stage of the inflammation.—Mr. WALLIS had also seen the patient and confirmed the observations of Dr. Addinsell. He had been asked to perform laparotomy for exploratory purposes and at the time of the operation the appendicitis had so far subsided that he was unable to feel the appendix.—Dr. BERTRAM ABRAHAMS said that information was wanted as to which of the various organisms present in the appendix were responsible for the very acute form of inflammation which occurred in such cases as that brought forward by Mr. Wallis. He mentioned that there was one present in many cases which possessed a capsule and resembled Friedländer's pneumococcus.

Mr. TREGELLES FOX (Strathpeffer) exhibited a specimen of Meckel's Diverticulum which caused the death of a child five years of age. It was greatly dilated and had a free pyriform extremity. This had become lodged under a dilated transverse colon and its pedicle had become twisted, forming a band under which a coil of the small intestine had become incarcerated. Owing to the twisting of the pedicle and interference with the vascular supply sloughing of the wall of the fundus of the diverticulum had taken place, leading to perforation and fatal general peritonitis. In addition to the abnormality described there was an absence of an ascending colon, the cæcum being just under the liver. The ileo-cæcal valve was competent. Another developmental defect was present—partial cleft palate. Until the onset of the fatal illness, which lasted four days, there were no abnormal symptoms beyond those of dyspepsia

Dr. FREYBERGER showed a specimen of an Anomalous Brachiocephalic Arterial Trunk associated with Aortic Incompetence and symptoms suggesting Aneurysm. The patient was a woman, thirty-six years of age, who was admitted suffering from aortic disease to the Great Northern Central Hospital under the care of Dr. Clifford Beale. A pulsatile swelling was observed above the right sterno-clavicular articulation which simulated an aneurysm. At the necropsy it was found that the swelling was due to an abnormal arrangement of the great vessels at the root of the neck. There was a large trunk arising from the summit of the arch of the aorta out of which sprang the right subclavian artery and both common carotid arteries as well as the inferior thyroid artery. The left subclavian arose from its normal situation. The first part of the aorta was dilated, but the rest of the arch was normal. There was extensive disease of the aortic valves of rheumatic origin.—The PRESIDENT remarked that the condition of things in this specimen was that normally occurring among some apes and some of the lower mammalia. It was of interest because Galen, who used apes for anatomical purposes, described it as the normal condition of the parts. The mediæval anatomists, who followed the authority of Galen, also figured this trunk in their anatomical works, and Dr. Freyberger's photograph strongly reminded him of illustrations which he had seen in the old anatomical treatises.

CLINICAL SOCIETY OF LONDON.

Obliterative Arteritis.—Obstruction of the Inferior Vena Cava.—Locomotor Ataxy with Complete Analgesia.—Trephining for Symptoms of Cerebral Tumour.—Arsenical Neuritis.—Injury of the Brachial Plexus.—Operation for Ulcer of the Leg.—Lesion of the Medulla Oblongata.

A MEETING of this society was held on Jan. 14th, the President, Mr. LANGTON, being in the chair.

Mr. W. G. SPENCER showed a man, twenty-seven years of age, suffering from Obliterative Arteritis. The first symptoms appeared in the left leg in August, 1897, and they increased till October, when amputation of the leg was necessitated through the development of gangrene, which spread up from the toes. By the middle of November the stump had healed and the patient's general health had greatly improved. The femoral artery was found to be obliterated in the stump, but the femoral vein was patent. Only one small vessel was tied and there was very little oozing. The skin of the right lower limb, which was colder than the left, had since desquamated, but was now almost normal. The case was similar to one reported by Mr. Pearce Gould in 1884 of a young man, nineteen years of age. In that case the disease, after progressing for about three years, came to a standstill. The late Dr. Hadden had recorded a case which he had watched for two years and the disease in his case also progressed for two years and then became stationary. In Mr. Spencer's own case the arteries in the right arm were thickened. The tibial arteries in the stump showed thickening of the intima and in the thigh the vessels were firmly thrombosed, but there was no obvious change in the arterial coats. The condition of the abdominal aorta and of the iliac arteries was doubtful.—Mr. PEARCE GOULD recalled the case of a man with gangrene of the left leg due to obliterative arteritis for which amputation of the leg was performed. He remained well for eighteen months and then symptoms developed in connexion with the right leg consisting of numbness, pain, and a sensation of cold. No pulse could be felt in the tibial or popliteal artery. The symptoms had persisted till the present time.

Dr. C. W. CHAPMAN showed a man with symptoms of Obstruction of the Inferior Vena Cava associated with Bradycardia. Both legs were swollen and there was a varicose condition of the veins of the legs and of the abdominal wall. There was a loud, rough, systolic murmur on the right side of the chest but no enlargement of the heart. There was no albumin in the urine. Dr. Chapman thought that the thrombosis was due to influenza, from which the patient was suffering when the symptoms developed six years ago.—Dr. J. J. PRINGLE related a similar case which had recently been under his observation in a lad thirteen years of age. When brought to him he was suffering from purpura on both legs, some of the spots having coalesced and ulcerated. On examination of the chest he found evidence of obstruction of the inferior vena cava. This appeared to have been an immediate sequela of an attack of scarlet fever. He recovered under simple treatment but relapsed a year later and again recovered. He thought that the bradycardia in Dr. Chapman's case was a coincidence.—Dr. MORISON remembered a case of venous thrombosis in a man, sixty-five years of age, which commenced in the veins of the legs and extended to the groins and ultimately to the external iliac arteries. He had two attacks of pleural effusion during his illness. He was very depressed and tried to commit suicide by refusing food, and during that time his temperature fell to 91° F. He died at the end of two years.

Dr. C. E. BEEVOR showed a case of Locomotor Ataxy with almost complete Analgesia. The man was fifty years of age and had shown tabetic symptoms for six years. There was no specific history. He presented all the ordinary symptoms of locomotor ataxy and in addition there was complete analgesia over the whole body except on and around the mouth. Loss of sensation to touch was slightly marked and present on the arms and trunk mainly. The analgesia began in the legs and spread upwards. Dr. Beevor accounted for the escape of the mouth by supposing that morphologically the mouth was the most anterior part of the body as seen in most of the lower animals.

Mr. PEARCE GOULD showed a man, forty-one years of age, whom he had Trephined for symptoms of Cerebral Tumour. The patient, a robust man, who had not received any injury, was attacked by severe headache, followed by aphasia, twitchings, facial palsy, and paralysis of the right side of the tongue. As his condition was rapidly getting worse he was trephined on the supposition that there might be a tumour in the frontal lobe. The dura mater bulged but did not pulsate. The brain beneath appeared perfectly normal and exploration failed to find any excess of fluid. Nevertheless the patient began to improve and the surface of the brain instead of bulging became concave after a few days. After a time he resumed work and with the exception of a few epileptiform attacks he had been well.—Dr. SIDNEY PHILLIPS mentioned the case of a man who had received some injury to the head fourteen

years before. Six months before admission he suffered from headache and vomiting. There was no optic neuritis. He had a very slow pulse and just before the operation it was as low as eighteen. As there was a tender spot he asked Mr. Clapper to trephine. Nothing was found except some thickening of the bone, but the patient made a complete recovery. Immediately after the removal of the bone the pulse rate rose to sixty and was sixty-seven when he left hospital.

Dr. COLMAN showed a case of Peripheral Neuritis from Arsenic. The patient was a girl, aged twelve years, who was admitted to the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, in December, 1897, with the following history. From Sept. 27th to Oct. 28th (with the exception of six days when the treatment was discontinued on account of gastric disturbance) she was given fifteen minims of liquor arsenicalis three times a day for the cure of chorea. She left the hospital in which she had been treated cured of the chorea and apparently quite well. On Nov. 10th she complained that her legs were weak and tingled. In another week there was distinct ankle drop. When admitted to hospital there was almost complete paralysis of all muscles below the knees, with well-marked reaction of degeneration. There was also some weakness of the extensor muscles in the forearm with diminished faradaic reaction but no reaction of degeneration. There was no alteration of cutaneous sensibility but there was great tenderness of the muscles of the leg. There was well-marked arsenical pigmentation in the neck and groins. She had been kept in bed and treated by massage and galvanism and she was rapidly recovering. The case was of interest by reason of the delay that occurred between the cessation of the arsenical treatment and the onset of the symptoms. It also showed that these somewhat heroic doses of arsenic which were so much used in the treatment of chorea were not unattended by serious risk. Several instances of similar paralyses had come under his notice, and in one at any rate recovery did not take place.—Dr. BEEVOR said that he had seen a case in an adult after six weeks' treatment who presented double wrist drop with severe pain in the legs. There was no recovery two years later.

Mr. F. C. WALLIS showed a case of Injury to the Brachial Plexus associated with Dislocation of the Shoulder. In June, 1896, the patient, a woman fifty years of age, fell downstairs and injured her shoulder. This was left unattended to for three weeks and an attempt was then made to reduce a dislocation. She came to hospital in December, 1896, complaining of a constant gnawing pain in the joint, and there was almost complete paralysis of the right arm with complete loss of sensation and glossy skin. He could feel that the head of the humerus was enlarged and he cut down upon it and found that the cords of the brachial plexus were implicated in tissue which was itself adherent to the periosteum. This was carefully stripped off and under a course of massage a great improvement had taken place. There was now a fair amount of movement and sensation had returned, though the skin was still glossy. There was no longer any pain.—Mr. WALLIS also showed a man on whom he had operated for the relief of an obstinate Ulcer of the Leg by a new method. The patient had been shown before the society at the end of last session before healing was complete, and Mr. Wallis now brought him in fulfilment of a promise that he then made. It will be remembered that the method consisted in making two incisions through the skin and fat on each side of the ulcer, and raising the skin, &c., between these incisions and the ulcer from the deeper tissues. The edges of the ulcer were then pared and brought together, so that a gap was now left in healthy tissue at the site of the lateral incisions, which he filled up with Thiersch grafts. The ulcer and lateral incisions were now soundly healed. He had employed this method in two other cases since, and in one it had been successful, while in the other, a chronic case with much thickening, the result had been unsatisfactory.

Mr. RAYMOND JOHNSON showed a child, twelve years of age, in whom he had ligatured a Femoral Aneurysm. She was brought complaining of pain in the right hip and a swelling in Scarpa's triangle which was at first thought to be an abscess in connexion with the hip, as the tissues above it were red and inflamed. There were, however, well-marked pulsation and thrill as well as a loud bruit. In operating he made an incision in the linea semilunaris through which an assistant could introduce his finger and control the external iliac artery. He then cut down on the aneurysm and turned out the sac, ligaturing the artery above and below. He could not say whether the profunda was involved. He thought that the aneurysm was probably of embolic origin, as the patient had extensive valvular disease of the heart.

Dr. PURVES STEWART showed a man, aged thirty-eight years, who exhibited symptoms pointing to a Lesion of the Left Side of the Medulla Oblongata. There was no history of venereal disease. He had had an injury to the head some time since, but it was not followed by any symptoms at the time. A year ago he began to drag his right foot and then the right hand began to feel heavy. Five months ago he experienced difficulty in swallowing and articulation and his voice became hoarse. Three months ago, on admission, he complained of giddiness and unsteadiness in walking. There was no optic neuritis. Treatment by iodides and mercury was without effect. The symptoms seemed to point to a lesion of the medulla extending back to the left inferior peduncle of the cerebellum, and they might possibly be due to a tumour, an aneurysm of the vertebral artery, or, as suggested, to an exostosis. It was probable that the nerve roots rather than the nuclei were implicated.

Reviews and Notices of Books.

A System of Surgery. Edited by FREDERIC S. DENNIS, M.D., Professor of the Principles and Practice of Surgery, Bellevue Hospital Medical College, &c., assisted by JOHN S. BILLINGS, M.D., Deputy-Surgeon-General U.S.A. Vol. IV. 1896. New York and Philadelphia: Lea Brothers and Co. Pp. 970. Price $6.

THE fourth volume of this excellent System of Surgery is before us and we may say that we consider it to be in every way worthy of the three volumes which have preceded it. The subject of Tumours has been treated by the chief editor, Dr. Dennis, and in the 127 pages devoted to the article we find a very satisfactory account of these growths. In treating of the etiology of tumours the author quotes several cases in support of his contention that local injury is a very important cause of sarcoma of bone. In one case a man was thrown from a train and sustained a fracture of the lower end of the femur. The fracture would not unite and nine months after the injury a subperiosteal sarcoma appeared at the fracture. In another case the patient received an injury to the fibula while skating and in three months from the time of the accident a round-celled sarcoma developed at the site of injury. Several similar cases are narrated, but though we acknowledge that local injury may predispose to the formation of a growth, yet in the cases quoted there is no proof that the sarcoma was not already present at the time of the injury; especially is there reason in the first case to think that the bone was already the seat of a new growth when the fracture occurred because the bone would not unite. The cases are interesting but by no means conclusive. The classification of tumours is ingenious but we sincerely hope that the names suggested may not become commonly used as it would be appalling to have to speak of a "teleangiectatic cylindro-cellular ino-epithelioma." We must also acknowledge that we fail to see why a fibroma (or, as the author prefers to call it, an "inoma") should be classed under "endothelial neoplasmata." A good account is given of the use of Coley's fluid in the treatment of malignant growths, and the opinion is expressed that the method has much value, but that as yet it is too immature. Dr. Edward K. Dunham, of New York, has contributed the section dealing with the microscopical structure of tumours; it is accurate and concise.

The article on Hernia has been written by Dr. William T. Bull, of New York, and Dr. William B. Coley, of New York. A very clear account is given of the various methods of radical cure of inguinal hernia and Bassini's method is preferred to the others. In speaking of the use of the worsted truss for infants the authors condemn it as worthless, quoting the

results in a series of 250 children under one year of age observed at the New York Hospital for Ruptured and Crippled in which alternate cases were treated with the worsted and the spring truss, and the latter was found to be much the more satisfactory. This is hardly in accord with the experience of many English surgeons.

The alimentary canal for surgical purposes is somewhat arbitrarily divided into two at the ileo-cæcal valve, the surgery of the portion above the valve being treated by Dr. Maurice H. Richardson, of Harvard, with the assistance of Dr. Farrar Cobb, of Boston, while that of the remainder of the intestine is dealt with by Dr. Lewis S. Pilcher, of New York. The former of these sections is exceedingly well written and an excellent account is given of the most recent methods of suturing divided intestine. It is a little difficult to see why the surgery of the spleen is included in this section. The surgery of the large intestine occupies more than a hundred pages; it is satisfactory and needs no comment except perhaps the expression of a doubt as to the desirability of calling the use of Dupuytren's clamp "comparatively safe."

The articles on Appendicitis, by Dr. Frank Hartley, of New York, and on the Surgical Treatment of Appendicitis, by Dr. Charles McBurney, of New York, contain practically all that can be said about this important condition. Dr. Robert Abbe of New York, contributes the section on the Surgery of the Liver and Biliary Passages; the space devoted to abscess of the liver is small, but a clear account is given of the present state of our knowledge of the origin of hepatic abscess. The next four articles are devoted to gynæcological surgery—the Surgery of the Uterus, by Dr. W. M. Polk, of New York; the Surgery of the Ovary and Tubes, by Dr. J. Taber Johnson, of the University of Georgetown; Minor Gynæcological Surgery, by Dr. H. C. Coe, of New York; and Symphysiotomy, by Dr. W. T. Lusk; all the articles are good, but we must especially praise Professor Lusk's elaborate account of symphysiotomy; it deals fully with the history of the operation, the anatomy of the parts concerned and the operation itself. The author concludes that it is distinctly of value in moderate degrees of pelvic deformity, as when the conjugate is between two and three-quarters and three inches, that the prognosis both as regards mother and child is favourable, and that the operation is entitled to a high place among the measures available in the treatment of difficult labour. Dr. R. F. Weir and Dr. E. M. Foot write on the Surgery of the Thyroid Gland; they endorse Kocher's opinion that a transverse incision, convex downwards, gives the best cosmetic result. An interesting paper on the Surgical Peculiarities of the Negro is from the pen of Dr. Rudolph Matas of New Orleans. We will quote only two of the conclusions arrived at by the author: one is that middle-ear disease is much less common in the coloured than in the white, and the other is that new growths are more prevalent. The editor has contributed the article on the Diseases of the Female Breast; it is well illustrated. A short paper on the Use of the X Rays in Surgery with reproductions of skiagrams concludes the book. The whole volume is a very creditable production of American surgery.

William Harvey. By D'ARCY POWER, F.S.A., F.R.C.S.Eng. London: T. Fisher Unwin. 1897. Pp. 263. Vol. II. of "Masters of Medicine." Edited by the late ERNEST HART, D.C.L. Price 3*s.* 6*d.*

THERE is no name of which English medicine may be more justly proud than that of William Harvey and in a series of volumes dealing with the masters of medicine he rightly occupies one of the earliest places. If we have any fault to find with this life of the great discoverer of the circulation of the blood it is that it is all too short. For this the author is in no sense responsible; and as the series of which it forms part is intended for the general public as well as for the medical profession it may well be that the editor did wisely in limiting the size of the volumes. A short, readable and inexpensive biography is certain of a far wider circle of readers than a larger and more elaborately detailed one would be. Yet in the volume under review, so interesting is the story to be told and so well and lucidly has it been placed before the reader by Mr. D'Arcy Power that one is tempted to regret that the last page is reached so soon.

The facts of Harvey's life, from his birth in 1578 to his death in 1657, are fairly well known. He came of good yeoman stock. His father was "jurat" or alderman of the port of Folkestone. He himself was the eldest of seven—"a week of sons," as Fuller quaintly phrased it. His school life was mostly spent at the King's School in Canterbury, whither he was sent in the memorable year of the Spanish Armada. In May, 1593, he was entered as a pensioner or ordinary student at Caius College, Cambridge. After taking his B.A. degree four years later he went at once to Padua, then almost at the height of its fame as a great anatomical school. It was probably the friendship which he here formed with the famous anatomist Fabricius then studying the action of the valves in the veins and teaching, be it noted, the most egregiously false views as to their functions, which roused Harvey's special interest in the circulatory system. It is remarkable that almost nothing is known of the exact date at which he first conceived the theory of the circulation of the blood and thus laid the foundation of all modern scientific medicine. It is more than probable that he himself could have fixed no exact date—that the conception was not born in a single moment but was rather a gradual growth the result of years of patient labour and observation. As early as 1616 he had clearly enunciated the principle in his Lumleian Lectures at the Royal College of Physicians of London, of which the original notes are still preserved in the British Museum. But though his teaching on this point was not only totally subversive of all accepted ideas, but was destined to revolutionise the whole of medical science, it seems to have made little stir at that time and it was not until the publication in Frankfort in 1628 of his immortal "Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus" that general attention was drawn to the new theory. Then we have it on his own authority "he fell mightily in his practice," for, as Mr. Power adds, "it was believed by the vulgar that he was crack-brained and all the physicians were against him." 'Twere a fine theme for moralising, but we prefer in the short space at our disposal to dwell upon the essay itself, in which the great discovery was first stated and defended. The author of the present biography has done wisely to insert considerable extracts from this essay. No comment, however eloquent, could equal Harvey's own golden words as a proof of his absolute originality, his wonderful powers of observation and no less wonderful industry. "We are too much in the habit of worshipping names to the neglect of things," he says in one place. In this work he goes straight to the heart of "things" as he himself observed them, though it involved the overthrow of the "worship of names" and went dead against all tradition and authority. The closely-reasoned argument is supported at every turn by evidence drawn at first hand from the whole animal world. There were few representative animals which Harvey had not examined, dissected, or vivisected and every fresh experiment only served to confirm him in the absolute correctness of his theory. The "Exercitatio" of Harvey and the "Inquiry" of Jenner perhaps stand alone as models of scientific essays announcing great discoveries to the world. Harvey's second great work, "De Generatione," while of much less importance than the "De Motu Cordis,"

is nevertheless full of original observations and shows in a remarkable way Harvey's extraordinary knowledge of the habits and ways of animals, a knowledge which could only have been gained by years of observation and experiment. But in many parts it shows clearly that he had not shaken himself free from the trammels of the semi-mystic false philosophy of his time. What was the nature of his other works—for ever lost in the pillage of his house by Cromwell's soldiers—can only be surmised. "Let gentle minds forgive me," he wrote, "if, recalling the irreparable injuries I have suffered, I give vent to a sigh"; and after describing the destruction of his treasures he adds: "Whence it has come to pass that many observations, particularly on the generation of insects, have perished, with detriment, I venture to say, to the republic of letters." We have no space to dwell on the interesting and often exciting incidents and events which filled Harvey's long life—on his intimate relations with King James I. and his unlucky son the Martyr-King, his dramatic experiences during the Civil War, his close connexion with, and generous benefactions to, the College of Physicians, his retirement in old age, and his death in 1657. With all his peculiarities of temper and manner and the oft-quoted eccentricities which marked the later years of his life he seems to have retained to the last a personality full of charm and interest. Full justice to this as well as to the scientific and other sides of his many-sided character is done in Mr. Power's well-written pages, which should find a wide circle of readers both within and without the profession. We may add that among the illustrations is one showing a specimen of Harvey's handwriting (surely the most illegible man ever wrote), reproduced from the block used to illustrate a paper which appeared in THE LANCET of Jan. 19th, 1895.

Diseases of the Liver, Gall-bladder, and Biliary System. By H. J. WARING, M.S., B.Sc. Lond., F.R.C.S. Eng., Demonstrator of Operative Surgery and Senior Demonstrator of Anatomy, St. Bartholomew's Hospital; Senior Assistant Surgeon, Metropolitan Hospital; Surgeon to the Belgrave Hospital for Children. Edinburgh and London: Young J. Pentland. 1897. Pp. 385.

THIS volume is an amplification of the Jacksonian Prize Essay for 1894. It has all the merits and defects that are invariable in such a work. Mr. Waring gives an excellent *résumé* of the most modern views on all questions connected with diseases of the liver and gall-bladder. The very full bibliography at the end of the book leaves out no writer of importance on the subject here treated. The main defect of the book is that the author is able to give so comparatively little from his own clinical experience. There is a full account of a very interesting series of experiments on animals proving that large wedges of liver substance may be removed with due surgical precautions and the animal recover completely. But it is at once obvious that the number of cases, in which such a condition in man as would necessitate such an operation is present, must be infinitesimally small if indeed diagnosable. There is no better summary of our present knowledge on diseases of the liver, especially from the surgical aspect.

Obstetric Accidents, Emergencies, and Operations. By L. CH. BOISLINIERE, A.M., M.D., LL.D., late Emeritus Professor of Obstetrics in the St. Louis Medical College, &c. Profusely Illustrated. Philadelphia: W. B. Saunders. 1896. Price $2 net.

THIS little book is "not a treatise on midwifery or a manual of obstetrics, of which," as the author says, "there are excellent ones already written." It is convenient as regards size, print, and arrangement, and should, if the advice given is sound, be found useful to turn to in a hurry when the practitioner has to act promptly and feels a little uncertain what to do. Testing it in this way we looked up accidental hæmorrhage as a good example of a case of emergency. We find that "the hemorrhage is more or less abundant if a considerable portion of the placenta otherwise normally situated has, from some violent or accidental cause, been detached. ..... This condition constitutes a case of *accidental hemorrhage* proper and is not caused by an originally abnormal implantation of the placenta, but by an accident which occasions its premature detachment and which gives rise to *unavoidable hemorrhage*." Seeing how almost universally among obstetric teachers the expression "unavoidable hæmorrhage" is understood to mean that due to placenta prævia we think, if the word "unavoidable" above quoted is not a misprint, such a passage is extremely confusing both to the student and the practitioner. Indeed, the author does not appear to regard accidental hæmorrhage as generally a matter of much importance. He recommends rest in the horizontal position as the general treatment for accidental hæmorrhage, but if this does not control the hæmorrhage and the loss of blood is alarming a tampon should be used according to the method described above. If the flow is then not checked forced delivery should be resorted to. He advises incisions to be made into the cervix and the child delivered with forceps or by version, according to the presentation. The line of conduct here recommended cannot be regarded as judicious. Incisions into the cervix and forced delivery are likely to lead to lacerations of the cervix and so to cause additional hæmorrhage, while if that is not fatal the patient will often die from post-partum hæmorrhage caused by the inertia due to the rapid emptying of the uterus. In some other sections we are not altogether in accord with the author's views. The print is clear and the illustrations are generally good.

LIBRARY TABLE.

Medical Hints for Hot Climates and for those out of reach of Professional Aid. By CHARLES HEATON, M.D. Brux., M.R.C.S. Eng., L.R.C.P. Lond. London: W. Thacker and Co., 2, Creed-Lane. Calcutta: Thacker, Spink, and Co. 1897. Price 3*s.* 6*d.*—The title of this work is sufficiently explanatory of its nature. It is what it pretends to be—a portable book of medical reference with plain practical hints and advice for people residing at out-stations or travelling in hot climates where skilled medical aid is not readily available for the treatment of emergent sickness or injury. It is clearly printed and supplied with well-defined headlines to paragraphs which increase the facility of reference; the directions are simple and the list of appliances and drugs (of tabloid form for choice) recommended is not too large. It is a good, useful little book of its kind.

Die Farbenblindheit und ihre Diagnose. Von Dr. M. OHLEMANN. Braunschweig: T. H. Meyer. (*Colour-blindness and its Diagnosis.* By Dr. M. OHLEMANN. Brunswick: T. H. Meyer). 1897. Price 2*s.* Also Supplement. Price 1*s.*—In a compact form and with simple directness of description Dr. Ohlemann has prepared this handy volume with the object of instructing medical men and civil authorities who have to test the capacity of individuals to discriminate colours. Total colour-blindness, he points out, is a very rare condition, but, on the other hand, partial colour-blindess is fairly common. Holmgren estimated for Sweden that about 2 per cent. of the population were partially colour-blind, in one-half of the affected there being either complete green or red blindness and in the remainder an imperfect sense of colour. The author of this little work describes the various methods of testing—namely, by the spectrum, by contrast colours, and by pigments. A plate showing the normal spectrum and that as seen by the red-, green-, and totally colour-blind

respectively is appended. A useful Supplement has also been issued containing cards of different shades of colour which may be substituted for coloured wools.

Les Troupes Coloniales: Maladies du Soldat aux Pays Chauds. Par F. BUROT, Médecin Principal de la Marine, et M. A. LEGRAND, Médecin de Première Classe de la Marine. (*The Colonial Troops: Diseases of the Soldier in Hot Countries.* By F. Burot, Chief Medical Officer of the Navy, and M. A. Legrand, Naval Medical Officer of the First Class.) Paris: J. B. Baillière et Fils. 1897. 1 vol., 8vo, pp. 184, prix 2fr. 50c.—This interesting little work is dedicated to Dr. Auffret, the head of the French Naval Medical Department. The opening sentence of a brief introduction runs as follows: "We know now in what proportion our soldiers die in our colonies." Each corps used to keep up its own statistical records, but apparently no attempt at a general compilation has heretofore been made. As the result of an inquiry undertaken by the authors we learn that the colonial military death-rate during the quinquennium 1891-95 was equal to 42·95 per thousand per annum, that of the Fleet and of the Army on home service for the same period having been respectively 11 and 6 per 1000. Naturally the incidence of the mortality varies greatly in the several colonies, ranging from 107·1 and 103·7 per 1000 in the Soudan and Madagascar, to 3·8 per 1000 in Guadeloupe, and 2·6 per 1000 in Tahiti. The causes that swell the death-rate in hot countries are comparatively few in number. According to the authors they may be grouped under the following twelve heads: 1. Paludism. 2. Dysentery and Diarrhœa. 3. Hepatitis. 4. Insolation and Heat-Stroke. 5. Cholera. 6. Yellow Fever. 7. Typhoid Fever. 8. Tuberculosis. 9. Other Diseases. 10. Wounds. 11. Accidents. 12. Warfare. To each of these subjects a chapter is devoted but, as might be expected, the first is by far the longest and the most important, paludism being responsible for three-fifths of the total losses. The grand source of disease and death is the soil. Telluric action is predominant in the genesis of the chief endemics, climate playing quite a secondary *rôle* as a producer of unhealthiness. As colonies grow older they become more salubrious because the conditions that foster malaria tend to disappear under the influence of civilisation. It should be the unceasing endeavour of those in authority to purge the soil of its malarious poison and keep it pure by sanitation.

Handbuch der Anatomie des Menschen. Herausgegeben von Professor Dr. KARL VON BARDELEBEN. Fünfter Band, Erste Abtheilung, Sinnesorgane. Erste Abtheilung, Haut (Integumentum commune). Von weil Professor Dr. A. VON BRUNN. Jena: Verlag von Gustav Fischer. 1897. Preis für Abnehmer des ganzen Werkes, 4 m.; für den Einzelverkauf, 5 m. (*Handbook of Human Anatomy.* Edited by Professor KARL VON BARDELEBEN. Vol. V., Part I., The Sense Organs. Part I., Skin (Integumentum commune). By the late Professor A. VON BRUNN. Jena: Gustav Fischer. 1897. Price 4*s.* for subscribers to whole work; 5*s.* if purchased separately.) —This instalment, the fifth that has yet appeared, of the serial issue of von Bardeleben's exhaustive treatise on anatomy forms a complete monograph upon the structure of the skin and its appendages and is written by the late Professor von Brunn, of Rostock. It opens with a description of the cutis, its general disposition and the variations in its structure seen in different parts—the subcutaneous bursæ—and the disposition of papillæ. The various layers are then described; first the epidermis and then the corium—the cell arrangement of the former and the disposition of the fibres of the meshwork of the latter being elaborately dealt with. Then comes the description of the elastic tissue, vascular supply, and seats of pigmentation of the skin. The development of the skin is briefly sketched, and a large part of the monograph is devoted to the structure of cutaneous appendages—hairs, and nails, and the glands. Separate sections are devoted to the nerves and blood-vessels, whilst the mammary glands, regarded as cutaneous structures, are described anatomically and morphologically. There is a full bibliography appended to the monograph, which contains within its 100 pages no fewer than 117 admirably executed illustrations.

JOURNALS.

Brain: A Journal of Neurology. Edited by A. DE WATTEVILLE. London: Macmillan and Co. Autumn, 1897.—This number of *Brain* which has just been issued is a most interesting one and its interest appeals not only to the clinical but also to the histological neurologist and to the general medical reader. The first article is on the Endogenous Fibres of the Lumbo-sacral Region of the Spinal Cord, by Dr. A. Bruce. An annotation on this article has already appeared in our columns.[1] This is followed by a description of the Morbid Anatomy in one of the exceedingly interesting cases of Hereditary Ataxy described by Dr. Sanger Brown in *Brain* a few years ago. Dr. Mumford's article on Survival Movements of Human Infancy is of interest even to the non-medical reader; and Dr. Harris's valuable observations on Hemianopia will awake fresh interest in this symptom. Dr. Grünbaum has a short note on Muscle-spindles in Pseudo-hypertrophic Paralysis and contrary to other observers believes he has found some change in them in this disease. Dr. Ruffini, of Bologna, and Mr. Victor Horsley both write on Sensory Organs in Voluntary Muscle. Dr. Foxwell describes a case of Acute Graves's Disease both clinically and pathologically, and Dr. Coombs Knapp, of Boston, contributes a suggestive article on Traumatic Neurasthenia and Hysteria. There is also a short account of the Proceedings of the Neurological Society at its Pathological Meeting in October. It will be seen that the number is one of much value and that the papers discuss several subjects which have comparatively recently acquired fresh interest.

The Practitioner.—With the opening of the new year this excellent monthly journal comes out with a newly-designed wrapper. From the editorial paragraphs we learn that several new features are to be introduced. Clinical notes from the hospitals will be published and communications from leading American medical writers are promised. The original papers for January are three in number. Sir William Broadbent contributes a practical paper upon Dilatation of the Stomach; Mr. Tubby writes upon the Immediate Reduction of Angular Curvature of the Spine; and Dr. Vivian Poore upon the Use and Abuse of Antiseptic and Germicide Remedies. Among these he mentions garlic (raw) as a means of getting rid of the foul odour of the sputa in bronchiectasis. The Hero of Medicine is mes Marion Sims.

Caledonian Medical Journal.—The subject of Second Sight, which has hitherto been discussed from a sympathetic point of view by Dr. Alastair MacGregor, of Huddersfield, is now criticised by Mr. Andrew Lang, LL.D. From the general tenour of his article and his references to "alcohol, fever, incipient brain disease," Mr. Lang is evidently no more than a half-hearted believer, but he nevertheless acknowledges that within the last three years a death was predicted by a "phantom coach" and that a cousin of his had a vision of a "thumbless hand." In conclusion Mr. Lang says: "It is a matter within my own knowledge that a percentage of people can provoke hallucinations by merely gazing into a glass ball. I have had experience convincing to myself that a small percentage of such hallucinations are 'veridical,' or, in popular language, are

[1] THE LANCET, Jan. 8th, 1898.

real cases of 'second sight.' Anyone who knows a Highland seer might make an interesting and harmless experiment by trying him with a glass ball." The article on the Macbeths of Islay, by Dr. Robert C. Maclagan, brings the series to a conclusion. Dr. H. Cameron Gillies continues his philological papers on the Gaelic Names of Diseases.

Archives Internationales de Pharmacodynamie. Vol. IV. Fasc. 1 and 2.—Plugge and Schutte have investigated the toxic alkaloid, dioscorin, extracted from the root of the yam, *Dioscorea hirsuta Bl.* They succeeded in isolating a pure substance melting at about 43·5°C., having an action like that of picrotoxin, but feebler. It first produces convulsions, but finally paralyses. It acts only on the central nervous system, not on muscle, nerve, protoplasm, or blood. It is easily identifiable by various chemical reactions. Laverman contributes an article on Merck's digitoxin. In a long and laborious research A. ver Heele shows that thyroidectomy reduces the quantity of urine, diminishes the urea and the phosphates, but increases the chlorides in the urine. Partial thyroidectomy produces quantitatively smaller results. The ingestion of thyroid gland produces just the opposite effects except that the chlorides vary proportionately to the amount of water. The Pasque flower (*Anemone pulsatilla*) contains an alkaloid which has been once more investigated by Noel and Lambert. The pure substance is but slightly toxic as distinguished from the very poisonous properties of the plant as a whole. The volume is completed by a necrologue on Plugge by Heymans. Plugge was Professor of Pharmacy and Toxicology at the University of Groningen and died at the age of fifty years, a victim to beri-beri in Java, whither his enthusiasm to study the toxic plants of the Dutch Indies in their native home had led him. P. Courmont contributes an article on the Relation of the Agglutinating Power of "Typhoid" Serum to the other Properties Acquired by the Serum During the Course of the Disease. The first few pages are occupied with an endeavour to draw a distinction between "reaction of immunity" and "reaction of defence" and in describing the ordinary precautions necessary for experiments. Four sets were made in each series: A with agglutinated typhoid bacilli injected intra-peritoneally; B with the same dose (as A) of typhoid bacilli intra-peritoneally and the same dose of serum subcutaneously; C the same as A, with a non-typhoid serum; and D, with an injection of typhoid bacilli only. The inconstant form of bouillon culture was used. The serum was decanted a variable number (from one to ten) of days after collection and allowed to act a variable time (from nine to nineteen hours) on the bacilli. Whether any original serum contained typhoid bacilli or how the agglutinated bacilli were separated from the serum is not mentioned. Three animals were generally used in each set. Sometimes all three gave concordant results but generally only two out of three. Thus in one experiment A animals survived 39, 60, and 39 days and B animals 29, 33, and 4 days respectively; in another, A survived 14, 2½, and 13 days, and B ½, 14, and 13 days respectively. Courmont draws the following conclusions from his 78 experiments with thirteen sera: (1) during the first few days of illness the serum possesses a property *favouring* infection by bacillus typhosus; (2) later this is succeeded by a *vaccinating* (protective) property; (3) "typhoid" serum has an *attenuating* property proportional to its agglutinative power when left in contact with bacillus typhosus, but this property is independent of the two foregoing; and (4) there is a possibility of elaborating a serum *prognosis* as well as serum *diagnosis*.

Monist.—The least abstruse of the six original papers is one on the Philosophy of Laughing, by Dr. Paul Carus, the editor. Although the author does not approach the subject in a humorous vein the gravity of philosophical discussion is incidentally relieved by various historical pleasantries which he introduces merely for the purpose of illustrating his argument. The opening article is an ethnographical study by Professor G. Sergi of Rome. It is entitled "The Aryans and the Ancient Italians" and is based mainly on the craniology of extinct races. Professor Sergi concludes that the Aryans (in Europe) were represented in antiquity by the ancestors of the Celts, the Germans, and the Slavs; no Italian and no Hellenic people were among the Aryans.

Mercy and Truth.—Dr. Emmeline M. Smith describes her Persian experiences in Julfa, Ispahan and the neighbouring villages. Dr. Cook and Miss Timpson give an account of medical mission work at Mengo Hospital, Uganda. It is stated in the editorial paragraphs that there are forty-eight medical missionaries on the roll of the Church Missionary Society.

Analytical Records
FROM
THE LANCET LABORATORY.

COKAY (COCA WINE).

(ALLEN AND HANBURYS LIMITED, BETHNAL-GREEN, E.)

THE name of this preparation is derived partly from the word coca and partly from the word Tokay. It is in fact Tokay wine containing the principles of the leaf of erythroxylon coca. Analysis gave the following results:—Extractives, 19·27 per cent.; mineral matter, 0·55 per cent.; alcohol by weight, 14·82 per cent., by volume, 18·25 per cent.; equal to proof spirit, 31·99 per cent. The wine is said to be made not merely by the addition of the leaf extract but by macerating the dry leaves in the wine itself. We can quite accept this statement judging from the pleasant leafy flavour of the wine. That it contains an important amount of the active principles of the leaf is evident from the fact that the alkaloid cocaine was easily isolated and recognised. Since Tokay is a wine of peculiar value as a mild stimulant and tonic it affords an excellent vehicle for the purpose. The wine is sweet to the taste but possesses the agreeable characteristics of good Tokay.

BEEF-TEA TABULES.

(BRAND AND CO., LIMITED, 11, LITTLE STANHOPE-STREET, MAYFAIR, W.)

When, coupled with a consideration of the following results of analyses, it can be stated that the flavour of the beef-tea made from these tabules is satisfactory it will be evident that they are of distinct merit. The analysis was as follows:—Moisture, 15·38 per cent.; mineral matter, 11·68 per cent.; organic matters, 72·94 per cent. The organic matter was found to be composed as follows:—Muscular fibre, 11·40 per cent.; albumin, 1·88 per cent.; peptones, &c., 29·00 per cent.; meat extractives, creatin, &c., 30·66 per cent. The tabules dissolved in hot water require no further preparation. The resulting beef-tea is pleasantly seasoned and free from excess of salt. Its composition is quite in accordance with the requirements of invalids, affording the nourishing as well as stimulating principles of meat itself in a palatable form.

(1) PARAHYDROPIN; AND (2) COMPOUND SYRUP OF HYPOPHOSPHITES.

(LORIMER AND CO., BRITANNIA-ROW, ISLINGTON.)

The formula of Parahydropin is as follows: theobromine, 2 grains; calomel, ½ grain; sulphate of sparteine, ⅛ grain; and camphor, ¼ grain. The diuretic action of theobromine is well known and the addition of the accompanying drugs affords a useful combination. The preparation is suggested as a substitute for digitalis, theobromine offering some advantages over caffeine in this connexion. Unlike the latter body, while it is a decided diuretic theobromine is

more prolonged in its effect and is not so narcotic in its action. The Syrup of Hypophosphites is a very satisfactory preparation of standard strength and quite permanent. The preparation examined proved to be a clear, colourless syrup, absolutely neutral and containing no deposit. It may be relied upon as presenting in a perfectly stable combination the ingredients of an excellent tonic formula.

EDINBURGH TOFFEE.

(J. McGILL, 29, ASHLEY-TERRACE, N. MERCHISTON, EDINBURGH.)

This confection resembles toffee in composition, but it also contains the albuminoid constituents of milk. The materials employed are evidently carefully chosen.

RUSKS.

(L. T. OUWERKERK, FLUSHING, HOLLAND. AGENCY, J. GABOR AND CO., 85, LOWER THAMES-STREET, E.C.)

Evenness of texture and a satisfactory degree of crispness are the noteworthy features of these rusks. They are well cooked, of good flavour, and their crispness is preserved for some time. Their nutritive value is high seeing that as a result of careful cooking the carbohydrates occur chiefly in the soluble condition.

STERILISED MILK.

(J. HARRISON, EMMOTLAND DAIRY, NORTH FRODINGHAM, HULL.)

On opening the bottle containing this specimen the milk was found to be in a perfectly sweet and sound condition, which is sufficient evidence of its being satisfactorily sterilised. The specific gravity of the milk was 1034. The results of analysis were as follows:—Total solids, 11·35 per cent., fat, 2·43 per cent., mineral matter, 0·65 per cent. Satisfactory as the condition of this sample proved to be yet the milk is distinctly poor in quality. Both the fatty and mineral matters are decidedly below the figures of an analysis of milk showing a rich composition.

SUCHARD'S COCOA.

(P. SUCHARD, NEUCHATEL, SWITZERLAND, AND LONDON.)

On microscopical examination this cocoa proves to consist of an exceedingly finely ground powder. It possesses an attractive rich flavour, but contains a minimum quantity of the indigestible fat of the cocoa bean. Analysis gave the following results:—Moisture, 4·72 per cent.; fat, 32·80 per cent.; other cocoa constituents, 54·88 per cent.; mineral matter, 7·60 per cent.; alkalinity of mineral matter equal to 2·35 per cent. potash. The cocoa is quite neutral in reaction and therefore contains no free alkali. The method of preparation has evidently increased the mineral constituents with the advantage, however, of presenting the nourishing cocoa constituents in a more soluble and more easily digestible condition. The flavour of the infusion is rich and palatable, while no perceptible separation of insoluble matters occurs. The cocoa is evidently prepared on a line with dietetic requirements.

MALTED LEAVEN.

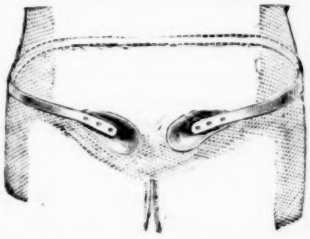
(W. G. DUNN AND CO., CROYDON, SURREY.)

We have examined this preparation carefully and find that it contains perfectly innocuous ingredients. On moistening it with water it effervesces, owing to the disengagement of carbonic acid gas. At the same time a pleasant malty smell is developed. It consists, in fact, of a mixture of bicarbonate of soda, tartaric acid (with a little starch), and active, dry extract of malt. Its function, therefore, is twofold—first, to "raise" dough and make bread light and spongy; and secondly, to exert some amount of digestive action upon the starches in the flour. The loaf thus produced certainly presents an excellent and uniform texture while the flavour is a decided advance on bread made in the ordinary way, being decidedly malty and somewhat sweet. The use of this "leaven" obviates, therefore, the uncertainty attending the preparation of bread with ordinary yeast, whilst the addition of active malt extract doubtless contributes advantages of a dietetic importance.

New Inventions.

A WASHABLE TRUSS.

MESSRS. SALT AND SON, of Corporation-street, Birmingham, have now made several improvements in their well-known celluloid-padded truss which was described in THE LANCET as far back as Oct. 29th, 1892. The springs of the new trusses are covered with celluloid as in the original invention, but modifications have been introduced in the process of manufacture which have the effect of increasing the durability of this covering and giving a superior finish to the article. Messrs. Salt and Son manufacture washable pads for their trusses in several materials—namely, in ivory, in celluloid of different colours, and in porcelain—which last is less expensive than the others. They are all made in a special shape designed with a view to lightness and rigidity, the back of the pad being hollowed and channeled in such a manner as to give the least possible weight consistent with strength and durability; the surface and edges of each pad are also carefully finished so as to fit comfortably to the body. A washable truss of this kind which can be easily kept clean is in some respects superior to the ordinary pattern of leather-covered truss.



HYPODERMULES.

MR. FRANK A. ROGERS, of 327, Oxford-street, W., has introduced a novel method of putting up solutions for hypodermic injection, his system being one which seems to possess several advantages in respect of accuracy and convenience. Instead of the solutions being supplied in bulk and measured with the same syringe which injects them they are carefully sterilised after being brought to the proper strength and measured quantities are then sealed up in separate small glass flasks which are usually of the capacity of either three or five minims each. These little flasks have slender necks, which when the contents are required for use are broken off with an instrument supplied for the purpose, and the needle of the syringe being then inserted into the flask the contents are drawn up and the injection proceeded with in the usual way. The solutions are always ready for use; no matter how long they may be kept they cannot become concentrated by evaporation and therefore increased in strength; the sterilising reduces the after-risk of boils and pustules to a minimum; the inconvenience of having to dissolve a solid is avoided; and there is no fear of giving an over-dose. Any size can be made and any formula can be included in these hypodermules.

THE LANCET.

LONDON: SATURDAY, JANUARY 22, 1898.

IT can scarcely have escaped the notice of our readers that public opinion is in a state of ferment at the present time in regard to the army. Great additions have been made of late years to the extent of territory under British rule or influence and the responsibilities of the empire have been thereby vastly increased and multiplied, but the strength of the army has not been augmented in any corresponding ratio. The time has come, in the opinion of the Government, when this must be done. The proposal was no sooner started, however, than it gave rise to another issue underlying the whole matter—namely, as to whether the nation derived the benefit it had a right to expect having regard to the expenditure already incurred, and whether our whole army system did not require to be thoroughly overhauled and radically re-organised. As might have been expected these subjects have been, and are still being, very keenly discussed. On the one hand we are assured that the short service system with all that it has entailed has practically broken down, and on the other hand it is argued with considerable ability and with all the force of figures that it is a sound system and has been productive of great benefit to the army and nation. Be all this as it may, there can be no doubt that great political and social changes have been, and are still, taking place. A democratic spirit has set in and is spreading, and people are growing more averse than they were to habits of discipline and restrictions of personal liberty as well as more opposed to all class distinctions and privileges. This, we need scarcely say, is not a favourable spirit for increasing the popularity of the army as a means of livelihood. An army without discipline is a mob, consequently discipline there must be; but the questions have to be faced whether the army has kept pace with the times and whether a number of changes of a minor kind might not be introduced into it and many petty restrictions removed which would have the effect of popularising the service without jeopardising discipline.

In any case one thing is clear: there cannot be a river without water or an army without recruits. How are these to be obtained and of the right sort? That is the question which a good many people are asking themselves at the present time and about which medical officers might venture to give an opinion. In the first place recruits must be taken when they can be had and when they can be drilled, trained and disciplined, and that is when they are young; but they should not be regarded as soldiers available for service whilst they are still mere boys. It is opposed to all physiological law to expect the physical results of maturity from growing and immature frames, whether of men or animals. The best fighting age is probably from twenty-four or twenty-five to thirty-five years. Practically short and long service might, we think, in a sense be amalgamated or run together. If young and immature recruits have to be taken, the services of those who are willing to remain with the colours when they have matured and are trained might probably be secured by offering them fresh terms and a pension. The efficiency of the army is apparently being sacrificed for the creation of a reserve under the existing system. In the present day and with a voluntary system of enlistment a soldier serving with the colours requires to have "a clear shilling a day and all found" if the army is to compete successfully with employments in civil life. If it be the case, too, as has been recently stated, that about 25 per cent. of the casuals at some of the London workhouses are army reserve men, and if a large number of reservists are tramping about the country either seeking employment or avoiding it from distaste to all settled labour, it is a bad object lesson as far as recruiting is concerned. Recruiting establishments should not be in back streets, but in light, airy, and pleasant positions, with attractive exteriors and should be provided with good interior accommodation and clean, inviting arrangements generally. When so much has admittedly been done of late years to improve the health and material comfort of the soldier it is surely desirable that he should be favourably impressed with what he sees at the outset of his career in the army. The accounts which occasionally appear in the press about the needless discomforts to which soldiers are exposed on shipboard have a prejudicial effect on enlistment. They should be investigated and if untrue contradicted, or if true corrected and guarded against. We think, too, that if the system of military camps of exercise in which men of the regular army, the militia, and volunteers were brought together from time to time were extended the effect would be favourable for developing the growth of a military spirit. Young men of all classes like outdoor life and exercises and are glad of anything which promises change and adventure.

We are strongly of opinion that everything should be done to maintain and cultivate a spirit of *esprit de corps*. The soldier's regiment is his home; he takes a pride in its good name and is proud of its traditions. As many a young fellow who may be but little influenced by religious principles is restrained and solaced by thoughts of his home and what his mother and sisters would think of him, so is he powerfully influenced and attracted by the good name and reputation of his corps and by the glamour of its deeds of gallantry in the past. Military service in the British army with our numerous colonies and dependencies is quite different from that of Continental armies. India, with its great drain on the young manhood of this country, has, for example, to be provided for, and to do this by a separate long-service army for that country would, it is feared, be merely to remove one great difficulty by setting up other great difficulties of another kind. We think that all are agreed on developing as far as practicable a system of decentralisation in the conduct of army administration. If Lord LANSDOWNE has a difficult problem to solve he has now a great opportunity for making his mark as a War Minister and statesman, and his proposals are anticipated with great interest not only on the general question but with regard also to the Army

Medical Service. There can be no question that the popularity of the army is much increased by everything which tends to the cure and comfort of the soldier when sick or wounded, and to secure these good hospitals and an ample supply of well-trained medical officers are necessary. We consequently look to Lord LANSDOWNE to do his best both for the army and its medical staff.

THE question as to what are the circumstances which justify the induction of abortion is one that often arises and can generally be answered without much difficulty if the fundamental principles that should guide us are borne in mind. We have reason to think, however, that at times, and perhaps not very rarely, practitioners who are fully alive to their responsibilities and really anxious to do their duty feel some doubt as to what is the proper course to pursue. Uncertainty of the kind referred to arises more especially, and indeed almost entirely, from the introduction of collateral issues into the main question. The wishes of the patient, or of her husband, or of her friends, for example, may be strongly in favour of the termination of the pregnancy, and it may need some firmness on the part of the medical man to disregard these wishes at the risk of giving offence and to form his opinion on the medical aspects of the case with due regard to the requirements of the law. Certain it is that medical men are frequently—none but medical men know how frequently—asked to terminate a pregnancy in circumstances in which compliance with the patient's request means the commission of a crime. There is apparently a good deal of ignorance on the part of some women about the right and wrong of the matter. Not very rarely a woman will say that when she and her husband married they agreed that there should be no family, that they formed plans of life which the presence of a family would seriously interfere with or completely alter, and she will, after the occurrence of two months' amenorrhœa has suggested pregnancy, come to her medical man asking him, as she may euphemistically term it, to help her and impressing it upon him *more feminarum* that he really *must* help her. When it is more or less gently pointed out to her that she is asking him to do what would be professionally infamous and what is besides actually a crime in the eyes of the law it is very common for her to say that at the early period of pregnancy supposed there can be nothing wrong since the child has not yet come to life. This is, of course, a ridiculous fallacy, but one often tenaciously clung to by women in such cases as that supposed. Argument with patients of this type is generally futile. Another plausible argument not rarely urged by women is that they are poor and unable to provide properly for children if they should have them. Neither of the two points just mentioned need, however, give rise to the least hesitation on the part of the medical adviser as to what is the right course for him to adopt. Neither inconvenience as regards private plans for the future nor even the real hardship that is occasioned, more especially to the children, by the marriage and fertility of persons unable to support a family are considerations that are entitled to the slightest weight as the law stands, nor do we think they give rise to any difficulty.

We now come to a more insidious argument than any we have as yet referred to. In no small proportion of cases both in married and in single women where there exists a strong desire to avoid giving birth to a child the patient will often declare her intention of committing suicide unless the pregnancy is terminated. She often threatens to take poison or to destroy herself in some other way. Now here several factors come into play. As regards the intention to commit suicide much obviously depends on the histrionic ability of the patient, much also on her force of character. According to her capacity, depending on both these factors, of leading her friends to believe that she really means to carry out her intention will be the effect produced on them. If they believe the patient is about to take her own life they in turn will be likely to urge on the medical man that to avoid a tragedy the pregnancy must be terminated and that it will be an act of gross inhumanity on his part to refuse to do so. It is in such circumstances that we think it may be helpful to some if we discuss the question a little and point out the fallacious character of this reasoning, since, if not clearly recognised as erroneous, it might easily lead to mistakes. The law forbids the production of abortion, but in certain cases it is justifiable to terminate pregnancy, the general law to the contrary notwithstanding. What, then, are the cases in which the practitioner may terminate pregnancy without breaking the law? The fundamental principle, we should say, is this: when the patient's life is *necessarily* exposed to great danger if the pregnancy is allowed to continue it is proper to terminate it after *adequate consultation*. In this enunciation of the general principle we should especially lay stress on the word "necessarily" and on the words "adequate consultation." To render abortion justifiable the continuance of the pregnancy must from the very nature of the case involve great danger to the life of the mother. Such cases are not common and in any particular practice we are sure they must be actually rare. When, for instance, a patient is the subject of the really dangerous variety of the vomiting of pregnancy—an extremely rare condition—it becomes justifiable to terminate the pregnancy. But the pernicious vomiting of pregnancy must be carefully distinguished from the more or less troublesome forms of the ordinary vomiting of pregnancy. The advice of someone of large obstetric experience should in such cases be sought, since, owing to the rarity of the disease, only someone with exceptional opportunities is likely to have seen many cases of it. The profound and progressive emaciation, the state of the tongue, which becomes dry and brown, the fœtor of the breath, the inability to sleep, the presence of blood in the material vomited, some fever, and an extremely small rapid pulse are the symptoms that characterise the really serious form of this disorder which we repeat is an exceedingly rare occurrence. In proof of this we may quote Dr. PLAYFAIR'S words: "It has fortunately but rarely fallen to my lot to have to perform this operation for intractable vomiting."[1] Another example of a morbid condition justifying the induction of abortion is renal mischief that

[1] Playfair's Midwifery, eighth edition, vol. ii., p. 231.

has supervened more or less acutely since the commencement of the pregnancy, with marked albuminuria, general œdema and perhaps ascites, and the presence of casts in the urine, and other grave symptoms of renal insufficiency.

No doubt also in some cases of contracted pelvis, where it is impossible for a living child to be born unless the mother is prepared to run the risk of Cæsarean section, she is entitled to exercise a choice. If she chooses that the pregnancy shall be terminated we cannot say that she is not within her right in doing so, and after proper consultation it is a legitimate thing on the part of the medical attendant to give effect to her wishes. Such cases, again, however, are certainly rare. A point that seems worth alluding to is that in many of the cases where abortion is especially and legitimately called for on medical grounds the patient herself has no desire for it and is not rarely averse to any interference. Again, we may say that the cases where the woman is most anxious to have the pregnancy terminated are precisely the cases to be regarded by the medical attendant with the greatest amount of suspicion and disinclination to interfere. Such cases furnish by far the largest proportion of the group in which the operation is not legitimate, or to speak more plainly in which to induce abortion is to be guilty of a crime severely punishable by the law. "Adequate consultation" is the other expression of special importance in the terms of the general proposition given above. Probably the text-books are partly responsible for some confusion that undoubtedly exists on this part of the subject. Thus in PLAYFAIR'S "Midwifery," already quoted from, we find this passage: "It is almost needless to add that no one would be justified in resorting to this expedient without having his opinion fortified by consultation with a fellow practitioner." This is very good advice as far as it goes, but it scarcely goes far enough, since there are instances where a medical man has been under the impression that his action in inducing abortion will be blameless so long as he can find another member of the profession to agree with him in considering interference justifiable in the particular case. It should be clearly understood that it is essentially a question of the rightness or otherwise of the operation in the case under consideration. If two men, or any number of men, agree to do what is wrong the action remains wrong notwithstanding the number of those concerned in it. Unless the grounds on which they decide to act are such as will satisfy the requirements of the law the mere fact that two or more are concerned, instead of one, in doing what is done is of no importance. It is not the number of practitioners concerned but the actual merits of the particular case that will render the course adopted legal or otherwise. The fact that a patient threatens to commit suicide unless her medical man terminates the pregnancy is no justification at all for him if he should comply with her wishes. That she threatens to do what is wrong in no respect improves his position if he consents to do what is wrong. If she is mentally in such a state as to be unaccountable for her actions that is a good reason for having such a patient carefully watched, or, if necessary, put under restraint. As a general rule, as is well known, patients who threaten to commit suicide in the circumstances in question do not do so. But it cannot be too clearly insisted on that a threat of this kind does not justify the induction of abortion. Were it otherwise the law against abortion would for obvious reasons at once become a dead letter. When all has been said the cases in which it is right to induce abortion are exceedingly few. The safest course in practice is not to prematurely terminate a pregnancy until it has been shown to be necessary by adequate and independent examination of the facts by at least two medical men and after consultation between them.

THE deed which recently thrilled the public with horror and it might be said with something akin to a feeling of revengeful indignation has, by the verdict of the jury at the Central Criminal Court, been declared to have been that of a madman. To individuals unversed in the variations of mental alienation it was natural to view the "wilful murder" of Mr. TERRISS as the act of a wicked responsible agent. The definition of the crime set forth in the indictment and endorsed in the verdict implies that the murder was done under conscious motive. There can be no gainsaying the fact that this was so, but then we have to explain the inadequacy of the motive. Even were the alleged wrongs of the convict PRINCE real and not exaggerated—and undoubtedly they were imaginary—it will at once be evident that there could be no moral, much less legal, justification for such fearful reprisal. Either the act was an exhibition of cold-blooded villainy deserving the severest punishment or it was that of a man driven by an irresistible impulse and therefore not criminally responsible. Such at least are the alternatives consistent with the present state of medical science. The statute law is less exclusive, for there the gauge of responsibility is that the accused should understand the difference between right and wrong and be able to appreciate the nature and quality of the act.

In a general sense PRINCE knew right from wrong and if interrogated on the abstract question would probably have admitted that it was wicked and illegal to commit murder. His fault or failing in the first instance was in supposing a persecution that did not exist and secondly in magnifying the extent of it. Then another phase of mental disorder came in support of his delusional insanity to complete the history of a crime—viz., the inability to restrain himself from acting in obedience to his over-stimulated fancy. In past times he would undoubtedly have suffered the extreme penalty of the law, which recognised only in insanity an aberration of the intellect to the exclusion of its moral and impulsive forms.

The view held by Mr. Justice MAULE—a member of the committee of Judges appointed to consider the question of criminal responsibility—though singular in that it was much more comprehensive and more in accordance with physiological and psychological teaching than that of his colleagues, has gradually but surely forced itself upon the judicial mind. It has been our painful experience to witness the laboured efforts of judges to reconcile the correct interpretation of the wording of the law with the precepts of medical knowledge. Homicidal mania is now generally recognised as a valid defence in criminal actions, and there is little fear of an unfortunate prisoner being hanged for an

offence which he has helplessly committed. Much that was formerly left to the judgment of juries is now submitted to them as facts upon which to base the consideration of their verdicts. We cannot help acknowledging the compliment paid to our profession at the recent trial in the qualification appended to the finding of the jury. "On the medical evidence," said the twelve good men and true, "we determine that the prisoner was insane at the time he murdered Mr. TERRISS and that he is insane now." It will naturally be asked why, if the prisoner was insane when placed in the dock, he was allowed to plead? The procedure was unusual and apparently illogical. It may be contended that if the prosecution knew the fact they ought to have called the medical evidence to prove it to the jury, in which case the trial would not have proceeded and PRINCE would, as now, have been ordered to be detained during HER MAJESTY'S pleasure. Possibly the Treasury were moved somewhat by the tension of public feeling and naturally wished that every feature of the tragedy and its antecedents should be fully demonstrated. Again, PRINCE'S behaviour when arrested and subsequently in the police-court did not betray to the unprofessional mind that intellectual derangement which is commonly considered as the only valid ground for a plea of irresponsibility. Moreover, the rigid portraiture of all the factors of a capital crime presented at a final tribunal is more impressive and convincing than the investigation in a court of committal. It might be argued that to subject PRINCE to the ordeal of a public trial knowing that he would be proved by the medical evidence to be insane was an act of unnecessary cruelty. The contention, however, could not be sustained when it is borne in mind how stolidly indifferent he was to his position, as shown by the utter absence of any sign of remorse and his persistent efforts to justify his act. It is probable rather that the publicity accorded him merely fed his vanity and was a source of pleasurable experience.

The general belief that persons at large must be considered of sound mind and that those who openly threaten to commit assaults are not the most prone to transgress the law—each a dangerous and fallacious conclusion—is the true explanation why men of PRINCE'S type are allowed unfettered enjoyment of liberty. Beyond all question had his mental state been fully inquired into long prior to the fatal attack on his unfortunate victim ample grounds would have been forthcoming to have ensured his being placed under restraint. As a lad he was a dreamer. Over-endowed with a sense of his own sufficiency and unheedful of the moral claims of others he drifted into deep waters. His false ambition, impossible of satisfaction, led him to look upon successful rivals as enemies and as persecutors. His delusion on this latter head becoming fixed, his unstable mind readily translated the means of revenge into the instrument of merited, and therefore justifiable, punishment. Wanting in will-power he at last found himself unable to resist the homicidal impulse. The fact that the crime was premeditated is not inconsistent with complete irresponsibility. He was deluded into the idea that he was being wronged and that it was right to revenge himself upon the fancied author of his misfortunes and sufferings. He was just as irresistibly impelled to provide the means and seek the opportunity to murder his victim as he was to commit the murder. The study of PRINCE'S life history and its tragic development give cause for anxious thought to those who are responsible for discharging from confinement, on *apparent recovery*, lunatics who have in their insane moments evinced homicidal symptoms.

THE movement for the formation of a teaching university in London either by the reconstruction of the existing University of London or by the establishment of a new university to be practically controlled by the teachers has again been brought to the fore. Since the abandonment of the Bill of last year by the Government the question has practically been ignored until very recently. The plan for a separate university, to be termed the University of Westminster, has been widely circulated and has obtained a certain amount of support, more especially among medical teachers, many of whom are graduates of other universities and not of the University of London, but we doubt if there is enough enthusiasm behind the movement to bring it into the arena of practical politics. We know the fate of the Gresham University scheme, even though that passed through the ordeal of a Committee of the Privy Council. Lord HERSCHELL on one side and the LORD PRESIDENT of the Council on the other, seem to be agreed that one university in London is to be the final settlement of the difficulty. Mr. CHAMBERLAIN, at Birmingham, on the 13th inst., pointed out that although Mason College had now been raised to the dignity of a university college it had not yet become a university. "The fact was the need of a local university had been recognised, and that at the present time Birmingham and the surrounding district was the only great centre in England which was not already provided with such an educational institution. Liverpool, Manchester, and Leeds had their Victoria University. Newcastle was closely connected with Durham. Wales had its own university. London had a university of a kind—which when Londoners were able to make up their minds would doubtless develop into something much better." Nothing can be more frank or candid than this statement. The University of London must be reconstituted, for two universities—one an Imperial examining board and the other a teaching university as in Scotland or Germany—will evidently not be supported by prominent leaders of both political parties. It seems to us, therefore, that although two separate institutions form by far the best ideal, the reconstitution of the existing university should be firmly supported by everyone who is anxious that the London medical student should enjoy the same opportunity of obtaining a degree as do his fellow-students in Scotland and the provinces. If Birmingham becomes a local university centre the students of this great metropolis will alone be debarred from obtaining degrees on the same lines as those which exist in every other educational centre.

So far as the solution of the problem is concerned the meeting of the Convocation of the University of London on Monday last affords but little promise. The house was thinly attended and the debate was carried on for two hours by barristers, whilst practical teachers of science and medicine were conspicuous by their silence. Questions

affecting the status of Convocation, the standard of degrees, and the equal treatment of internal and external students were discussed with a reiteration that was quite unnecessary. Every medical student is a collegiate and therefore an internal student. Candidates for degrees in arts and law are mostly non-collegiate and therefore external students. A division, in a house of 118, took place as to whether all the members of Convocation (some 4000 or more) should be invited to express their opinions *en plébiscite* and this was rejected by 76 votes against 42. The original motion, "That this house accepts the scheme embodied in the London University Commission Bill, 1897," was then put to the vote and passed. The dissentients declined to vote or to appoint tellers. The Bill is an avowed compromise, and like most compromises will have few ardent friends. The various bodies affected by the Bill will be received as a deputation on the 24th inst. by the LORD PRESIDENT of the Council, and then we shall be able to judge more clearly the intentions of the Government.

Annotations.

"Ne quid nimis."

A HERBALIST ABORTIONIST SENTENCED TO IMPRISONMENT.

A WOMAN of Wigan, Nancy Bedford, a herbalist, has been found guilty, after trial at the Borough quarter sessions on the charge of unlawfully supplying certain noxious things with intent to procure the miscarriage of certain women. The prosecution was instituted under Section 59 of 24 and 25 Victoria, C. 100, which enacts: "Whosoever shall unlawfully supply or procure any poison or other noxious thing, or any instrument or thing whatsoever, knowing that the same is intended to be unlawfully used or employed with intent to procure the miscarriage of any woman whether she be or be not with child shall be guilty of a misdemeanour." The police of Wigan in using this Act effectually have set an example to the police authorities in other towns who can scarcely be ignorant of the fact that this system is carried on extensively throughout the land. Superintendent Barry, of the Wigan Borough Police, in consequence of certain complaints instructed two women to apply at the prisoner's shop, state they were pregnant, and ask for something to make them all right again. They were supplied with medicine and pills and the first woman in addition with a powder. The composition of these various drugs was ascertained by Mr. W. J. Orsman, F.C S., public analyst for Wigan, and found to be as follows:—

Medicine—8 oz. bottle.

Colocynth	67 grains.
Aloes	90 grains.
Borax	77 grains.
Oil of savin	5 grains.

Two tablespoonful to be taken three times a day.

Pills.

Sulphate of iron	1 grain.
Ergotin	1 grain.
Ext. hellebor.	1 grain.
Ext. socot. aloes	1 grain.
Ol. sabinæ	½ grain.

Two to be taken three times a day.

Powder.

Colocynth	58 grains.

In the case of the first woman the powder was to be taken in two doses after finishing the medicine. Mr. Wm. Mitchell Roocroft, the police surgeon, gave evidence as to the dangerous nature of the medicines and the obvious and illegal intention with which they were supplied. Mr. William Berry, F.R.C.S. Irel., gave similar evidence. There can of course be only one opinion of the dangerous nature of the medicines here supplied and of the intention with which they were sold. The Recorder instructed the jury that the following points must be proved: (1) that the medicines were supplied by the prisoner; (2) that they were injurious, not necessarily fatal; and (3) that they were supplied with a knowledge that they were intended to be used unlawfully to procure miscarriage. In the end the woman was found guilty and sentenced to six months' hard labour. The case is a most important one. It shows what things go on and what crime is practised in the name of herbalism. We commend the action of the police of Wigan to the police authorities in all our large towns.

ELECTRIC RAILWAYS FOR LONDON.

THE enormous, and as many people think, excessive growth of our modern cities has given rise to a problem which the smaller towns of our fathers were not called upon to face, the problem of rapid and easy communication between one part of the city and another. In London this difficulty is specially felt on account of its immense population, and the first great attempt to deal with it was the construction of the Metropolitan and District Railways. Much was done no doubt by this to relieve the pressure of traffic on our streets, but with the ever-increasing area of modern London much remains to be done. The perception of this fact has led to the proposal of many new schemes for railways, some of which, the City and South London Electric Railway for example, have already been carried out, while others, such as the Central London and the Waterloo and City lines are still in process of construction. Others, again, have been projected but not yet taken in hand. The problem of what we may call "city" railways—railways that is which exist solely for local passenger traffic in large towns—has been differently solved in different cities and countries. In New York the overhead system has been tried and from every point of view save the æsthetic may perhaps be considered a success. At Liverpool again, to come nearer home, the overhead system has been resorted to for conveying passengers to and from the docks, the motive power being electricity. Instances might be multiplied of different methods of dealing with the problem. In London the feeling against "overhead" lines in the streets is, we think, insurmountable, and in London, therefore, the needs of rapid communication between different districts can only be met by the underground system. The old form of underground railway, however (represented by the Metropolitan Railway), has at least one great disadvantage. It is enormously costly to construct. Much may be said in its favour on the score of convenience, and investigations have shown that it is not unhealthy, but its cost is almost prohibitive. The new form of underground railway (of which the City and South London Railway was the pioneer) aims at providing an equally convenient means of communication at a greatly reduced cost. In place of the large brick-lined tunnels of the Metropolitan Railway two iron tubes of comparatively small diameter are carried under ground at a sufficient depth to avoid any claims for compensation by owners of adjoining property (a most extravagant item under the old system). The train is worked and lighted by electricity, and the cars are built on the American pattern, the interior of each resembling pretty closely an ordinary English tramcar. The "up" and "down" trains run in separate tubes so that collision between them is impossible and the

cars as nearly as may be fill up the total air space of the tube. The problem of ventilation in a tube at a depth of eighty or more feet below the ground might be thought to present difficulties, but this is solved by making the size of the carriages so nearly correspond to the diameter of the tube that each train as it passes through drives out all the air in front of it and draws in by suction a fresh supply from the station behind. The tubes are thus ventilated as it were automatically. This sounds so satisfactory in every way that we hardly like to point out the practical defects of the system as seen on the South London line, but those defects must be faced. In the first place, the travelling is very far from smooth even when compared with the Metropolitan Railway. The same fault is sometimes found by visitors in the case of the rapid electric tramways of, for example, New York. Indeed we have known bad sailors complain of true cross-channel qualms during a journey on the South London line. Again the new system is excessively noisy, mainly no doubt on account of the small diameter of the tubes. The metal casing may, perhaps, intensify this defect, but if the tubes were larger in relation to the cars the volume of sound would be less apparent in the increased air-space. The electric lights again are deficient in steadiness, but this might probably be remedied by some comparatively small alteration in the method of supplying them with power. It will be interesting to see whether the Waterloo and City and the Central London lines are able to adopt any means of successfully meeting these difficulties. Electricity we are always being told is the "motive power of the future," and its employment in underground railways has such obvious advantages that its progress deserves to be watched with interest.

THE MEDICO-LEGAL QUESTION OF THE INFECTION WITH SYPHILIS OF THE NURSE BY THE NURSLING.

PROFESSOR FOURNIER devoted his inaugural lecture at the Saint Louis Hospital to an exhaustive discussion of this question which may be difficult and have pitfalls for the unwary. In examining the nurse the discovery of a chancre in a position in which contagion from the child is possible is all-important (for simplicity, positions other than the breast are put aside). If a sore is present its induration and the existence of an indurated axillary bubo must be especially noted. If there is no sore, relics are to be looked for—a macula which is constant but lasts only for a few weeks; a cicatrix which is apparent in only two or three out of ten cases; induration which lasts for several weeks, and in the case of neoplastic-like chancres for periods up to five months; and a bubo which always remains for a certain time. The genital organs must be carefully examined and mucous patches in the form of papules or erosions must be distinguished from chancres, the presence or absence of buboes being especially noted. In examining the child the first point to be determined is—Is the syphilis acquired or congenital? In establishing the latter alternative the absence of chancre must be first ascertained. Next the period at which the secondary symptoms became manifested is to be noted. Every case in which secondary symptoms occur in the course of the first two months of life is congenital. Professor Fournier insists on this rule which he proves mathematically. Suppose that a child contracts syphilis on the day of its birth. The incubation period of chancre is three weeks at least—say, twenty days. The second incubation period averages about forty-five days—say, forty days; 20 + 40 = 60. Therefore the secondary symptoms of acquired syphilis cannot appear before sixty days (two months). Again, the presence of lesions peculiar to congenital syphilis will decide the question—coryza, pemphigus, epiphyseal dislocations, marasmus, cranial and nasal deformities. The examination of nurse and child being completed the relation of the disease in one to that in the other is to be considered. There are three possibilities. Either may have contracted the disease from the other or the attacks may be independent. At the examination of a case of hereditary syphilis the nurse showed some papulo-tubercular lesions manifestly too old to be the result of infection from the child. She proceeded to bring an action; inquiries were therefore made as to her antecedents, and it was found that four months before the birth of the child she was under treatment for constitutional syphilis. The previous condition of the nurse should therefore always be investigated, her child and husband (if there is one) should be examined. The condition of the former is of the highes importance. Immunity is an almost absolute proof of immunity of the mother. Syphilitic women may with rare exceptions beget apparently healthy children but scarcely with recent secondary syphilis present. Next the priority of disease in nurse or child must be ascertained if possible. The hereditary syphilis of the child, the previous immunity of the nurse, her infection by a mammary chancre which is in such a stage that it could have been acquired in the lactation being determined, is the practitioner justified in swearing that her syphilis must have been acquired from the child? Professor Fournier insists that he is not. All that he should say is that there are reasons which authorise the belief that the nurse could have acquired syphilis from the child. There may be other sources. Professor Fournier mentions a case in which the child suckled badly and the nurse disgorged her breasts to other infants in a public square, and two others in which chancres of the breast arose from venereal contamination.

THE CLIMATIC TREATMENT OF PULMONARY TUBERCULOSIS.

WE have on various occasions drawn attention to the views expressed by those who have studied the climatic conditions of the British Isles in regard to the suitability of various localities for the "open-air" treatment of pulmonary tuberculosis and have deplored the general inclination which exists amongst medical practitioners to send every person afflicted with this complaint to some foreign health resort. Fortunately this practice is not so uniformly adopted as it was a few years ago. Local medical geography is more closely studied and the result has been that several localities have been selected in which the "open-air" treatment may be satisfactorily carried out. For a considerable amount of our knowledge of the medical geography of Great Britain we are indebted to Mr. Alfred Haviland, late lecturer on the Geography of Disease at St. Thomas's Hospital. His article on this subject in Professor Clifford Allbutt's "System of Medicine" (vol. i., p. 46) contains valuable information, and in July of last year he published a paper in the *Journal of Balneology and Climatology* on Phthisis and the Isle of Man. This contribution has now been reprinted together with the Inaugural Address on Medical Geography as an Aid to Clinical Medicine delivered at the first meeting of the Isle of Man Medical Society in December, 1896.[1] Both articles well repay perusal. With regard to the occurrence of pulmonary tuberculosis in the Isle of Man Mr. Haviland points out that all the littoral districts exposed to the unchecked violence of the sea winds have the highest mortality from phthisis amongst females, whilst all the littoral districts more or less protected by precipitous cliffs have a low mortality. The more inland parishes also have a low mortality. Further, Mr. Haviland considers that there are many upland valleys in the Isle of Man where the open-air treatment can be well carried out; that these

[1] THE LANCET, July 31st, 1897.

localities should be made known, and the building of small cottages encouraged, upon the rotatory or turn-table principle, so that the occupant would be able without difficulty to turn them round to any point of the compass required. We trust that further developments of such treatment will be carried out throughout the kingdom. There are thousands of patients who find it impossible to carry out their medical adviser's recommendation to "go abroad," whilst if such arrangements were made as we have before suggested some months might then be devoted to a restoration of health in an English resort similar in general arrangement to Göbersdorf or Falkenstein.

THE HEALTH OF MR. GLADSTONE.

MR. GLADSTONE has suffered since the autumn of last year from a chronic nasal catarrh accompanied by facial neuralgia which resisted all the most careful treatment. Therefore, at Mr. Gladstone's urgent desire and because the climatic influence had previously always restored him to health, he was allowed to go to Cannes in spite of any risk attendant upon the long journey. At first the neuralgic pain almost disappeared and there were but fitful attacks. Subsequently the presence of the Mistral with cold and wet weather produced the return of the pain, but at no period has there been any evidence of increase of other inflammatory symptoms. The pain has continued since, though varying from day to day. This has doubtless had a depressing and disappointing effect upon the distinguished patient, but otherwise his general physical condition remains very much the same, and there is no further development to record. We are happy to be able to publish this information upon excellent authority, inasmuch as the rumours that were rife in the press during one or two days this week have been of a decidedly disquieting character.

ABDOMINAL SECTION IN CASES OF PROLONGED VOMITING.

WE have received a copy of a pamphlet by Mr. H. G. H. Naylor, of Hobart, Tasmania, containing a report of a most interesting case of obstinate vomiting in which abdominal section proved of the utmost value. The patient was a woman, a native of Tasmania, aged forty-four years, who stated that she had been vomiting all her food at irregular intervals daily for eighteen years. She had been under other treatment for most of this time without success. Mr. Naylor tried lavage but no relief was experienced. After observing the patient for some months and adopting various methods of treatment he came to the conclusion that there was pyloric obstruction and recommended an operation with a view either to perform pyloroplasty or gastro-jejunostomy, according to the nature of the obstruction. This view was corroborated in consultation by Dr. Wolfhagen. Laparotomy was performed in the usual manner and the pylorus was found deep down and adherent to the liver, the stomach itself being empty, flaccid, and not at all enlarged. On trying to draw the stomach out into the wound it could only be drawn slightly forward, being tied down by adhesions to the bowel below. These adhesions were separated and the greater part of the stomach was liberated, but the pyloric end was left adherent to the under surface of the liver. The patient made an excellent recovery and appeared to be quite relieved. The cause of the sickness, in Mr. Naylor's opinion, was the existence of the adhesions tying the stomach down above and below and producing spasmodic vomiting and tightening or constriction of the pylorus. The case is a suggestive one and Mr. Naylor has done good work in placing it on record. Cases are not unfrequently met with in which vomiting resists all attempts at treatment; some of these may be "hysterical" in nature, but others cannot be so classified, and the success of this case adds support to the plan not unfrequently adopted of an "exploratory laparotomy." In recent cases the conditions found obviously indicate further operation, but in others the happiest results may ensue after the necessary surgical procedures have been carried out.

THE LATE PROFESSOR TYNDALL AND THE ROYAL INSTITUTION.

SIR JAMES CRICHTON BROWNE, the treasurer of the Royal Institution, has received a letter from the widow of the late Professor Tyndall enclosing a cheque for £1000. This sum was left by Professor Tyndall to be handed over to the Institution by Mrs. Tyndall at such time as should be most convenient to herself, "to be disposed of as the Board of Managers may see fit for the promotion of science." Sir James Crichton Browne, in acknowledging the gift, says that of course the managers would be guided as to the disposal of the sum by the wishes of Mrs. Tyndall, but that in the absence of any explicit directions it will probably be employed in original research. He also refers to the bust of Professor Tyndall by Woolner in the possession of Mrs. Tyndall and inquires whether she would allow a replica of it to be made for the Institution, that body not possessing any worthy presentment of the late Professor Tyndall. This generous gift from Mrs. Tyndall will be all the more welcome seeing that the Royal Institution possesses little or no endowment for research with the exception of the magnificent laboratories founded by Mr. Ludwig Mond, which were opened last year.

A STRANGE CESSPOOL FATALITY.

AT Leicester last week an inquiry was held into the circumstances attending the death of a labourer who had lost his life while engaged in clearing out a cesspool which was evidently used as a sediment tank in connexion with a brewery and malting house. The cesspool contained liquid matter, and it was necessary to empty this down an outlet pipe by means of a bucket. There were two men engaged in the operation. The atmosphere had previously been tested by lowering a lighted candle with satisfactory results. One of the men, who afterwards gave evidence at the inquiry, said that when he descended he did not notice anything unusual about the smell, but the air was rather warm. The smell was strong but it did not make him feel sick. His companion, the deceased, did not appear to show any signs of distress after working in the cesspool, except considerable running at the eyes. As the scavenging proceeded the smell became more marked. The deceased descended for the third time, the men evidently relieving each other in the work. The witness hearing a kind of thud soon afterwards proceeded down the ladder to see what had happened, when he found the deceased lying on his back with his head against the wall, only one leg and arm and his head being above the surface. The deceased groaned but he did not appear to be conscious. The witness was at length obliged to go to the top for assistance and subsequently when attempting to extricate deceased he himself was overpowered, became unconscious, and fell into the liquid. He however recovered and managed to ascend again and get assistance. He felt very ill and was conveyed home but he was not able to give evidence for some time. Dr. Young expressed the opinion that death was due to suffocation caused by drowning. The jury, however, returned a verdict that the deceased died from accidental suffocation by some sort of noxious gas present in the cesspool but of what kind it was impossible to say. The death may have been due to suffocation by drowning, but

there seems little doubt that there was some deadly gaseous constituent present in the cesspool which had overpowered the deceased, since the man helping him was overcome in a similar way, though he escaped drowning. It cannot be too strongly impressed upon all those who engage men to do work in cesspools and excavations generally that every possible precaution should be taken to ensure the innocuous character of the atmosphere in such places. We should have thought that when dealing with a mass of waste and spent material derived from brewing operations some step would have been taken to ventilate the cesspool before a descent was made. It surely would not be a difficult matter in places where there is considerable steam power and machinery to connect an air-pump with the well so as to effectually drive out any poisonous gas that may be present, and the pumping could be continued so long as the labourers are engaged at their unenviable occupation.

AN INTERNATIONAL PHOTOGRAPHIC EXHIBITION.

THE announcement of an International Photographic Exhibition to be held at the Crystal Palace from April 27th to May 14th will be welcomed by a very large section of the public, for nowadays photography in its many applications is a pursuit followed almost by everyone. It is proposed to devote the entire nave of the Crystal Palace to this purpose. The arrangements have been placed in the hands of a committee the names of many of the members of which are well known in the photographic world. Half the number of the members composing the committee have been nominated by the council of the Royal Photographic Society, under whose auspices the exhibition will be held. We have received from Mr. R. Child Bayley, assistant secretary (a letter from whom is published in another column), a copy of the preliminary prospectus, from which it appears that the exhibition will be divided into eight sections: (1) the history of photography; (2) pictorial photography; (3) portraiture and general technical photography; (4) apparatus and material; (5) photo-mechanical processes; (6) scientific applications of photography (including medical photography and the application of the x rays); (7) photography in colour; and (8) photography as a science. With such an excellent and comprehensive programme in view the success of the enterprise should be guaranteed. All intending exhibitors should communicate with the secretary of the Royal Photographic Society at 12, Hanover-square, W.

CHARLES PELHAM VILLIERS.

THOUGH not concerned in the mere political aspects of the life of Mr. Villiers we are by no means disposed to withhold our tribute to his memory or the expression of our pride in the facts of his career. Such men, especially after the results of their labours are so universally admitted, cease to be the property of any party and become the veritable Fathers of the State. Besides, the nature of the legislation which Mr. Villiers initiated in Parliament and to the success of which he so greatly, yet so modestly, contributed was such as to call for our special meed of praise. It had reference to the supply of the food of the people. If there is one supreme duty of a State it must be to make the preservation of life possible to the poorest and the most laborious classes of the people. This was the object to which Mr. Villiers devoted himself almost against hope in the early part of his Parliamentary career and before Bright and Cobden by their eloquence had made it a burning question outside. It was the first big step in the direction of that social legislation which has for its primary object the health and the happiness of the people and which has carried the glory of the Victorian reign beyond all precedent. The aristocratic connexions of Mr. Villiers only make his merit the greater as they must have involved greater difficulties and prejudices to be overcome. In the same direction was his great work as head of the Poor-law Board in the Union Chargeability Act, which in its way was as humane and as great a boon to the poor as the repeal of the Corn Laws. We must not close without a word on another aspect of Mr. Villiers's life—its great length. He was born in 1802. And there is much of both moral and physiological interest in the fact that he not only lived for so long but held the position of Member of Parliament till the time of his death. Here is a lesson of permanence and persistency to public men. Mr. Villiers did not do his great work because he was physically strong; he was, on the contrary, of rather delicate constitution as a young man. Twenty-five years ago he was an old man and somewhat feeble, yet he has lived in honour among all men and all parties and in the length of his life and of his connexion with Parliament and with the constituency he represented for sixty-two years has left a record that is creditable to all concerned.

DIPHTHERIA AND THE LOWER ANIMALS.

AT Pembridge, near Birmingham, several cases of scarlet fever and diphtheria have lately occurred. All the cases of diphtheria—namely, five—were in one house supplied with water from a tank. This tank upon being opened was found to contain a dead mole to the presence of which Dr. Harding, the medical officer of health, attributed the disease. He reported these facts before a meeting of the Kington Rural District Council on Jan. 13th, and also mentioned that he had heard of a similar case before. The mole is an animal about which, owing to its habits, not very much is known. Worms form the staple of its diet, but it has been known to catch and eat birds and sometimes its fellows. That certain of the lower animals suffer from diphtheria or an analogous disease is well known, and the transference of diphtheria from the cat to human beings is not uncommon, but transference from the mole is we should say exceedingly rare. Amongst other diseases transmitted from domestic animals to human beings, leaving out of the question such well-known ones as anthrax, are "psittacosis" from parrots a complaint which has been variously described as resembling pneumonia and yellow fever, and favus which has been spread by the cat and the mouse. The spread of plague through the agency of monkeys and rats has been much in evidence in India of late and there is, we fancy, little doubt as to the *rôle* of flies in carrying infection. But for an animal like the mole, which is purely carnivorous and spends its life as much as possible out of contact with human beings, to contract diphtheria opens up new fields for inquiry as to the spread and mode of growth of the diphtheria bacillus.

LUMBAR PUNCTURE OF THE SPINAL THECA.

PROFESSOR GOLDSCHEIDER has contributed an article on this subject to the third edition of Eulenburg's Real-Encyklopädie. An abstract of this appears in the *Neurologisches Centralblatt* of Jan. 1st. The history and technique of the operation are first dealt with and then the writer considers (1) the diagnostic significance of puncture; and (2) the therapeutic effects. As to the former he considers the method most useful as an aid to diagnosis. It furnishes in doubtful cases confirmatory evidence of an increase of cerebro-spinal fluid and of pressure. If, clinically there are symptoms of severe pressure, and lumbar puncture furnishes evidence of only a moderate increase of fluid, an acute process might be inferred to exist. Distinct increase of albumin in the fluid would exclude simple hydrocephalus; on the other hand, a trace of albumin would indicate that the collection of fluid was not likely to be that of an acute inflammatory

process, but was probably the result of a damming-up of fluid such as occurs in cases of cerebral tumour. The significance of the sugar reaction is difficult to estimate. Coagulation of fluid probably indicates inflammatory affection, and its absence, tumour or hydrocephalus. Turbid fluid with numerous cells is in favour of purulent or chronic meningitis, although the fact that the fluid is clear does not necessarily negative such a diagnosis. Repeated withdrawal of blood-stained fluid probably indicates ventricular hæmorrhage, possibly bleeding into the subdural space. Tubercle bacilli, of course, indicate tuberculous meningitis and puncture makes it possible to diagnose acute serous meningitis. As to the therapeutic effect of the operation Professor Goldscheider thinks that in certain cases distinct improvement is to be expected. In conclusion the accidents that may be caused by spinal puncture are enumerated, especially such as may be caused by too rapid or too complete withdrawal of fluid.

A SKILLED ABORTIONIST.

ONE of the disgracers of his profession received his deserts at the Central Criminal Court on Jan. 18th in the shape of a sentence of seven years' penal servitude. His name was James Charles Ady and it will be remembered that a little time ago he, in conjunction with a woman calling herself Graham, brought an action against the *Sun* which was dismissed. Ady's name was then removed from the Medical Register and on Dec. 13th, 1897, Graham was sentenced to a term of imprisonment for illegal practices at Edinburgh. The offence for which Ady was sentenced on Tuesday was attempting to procure abortion and also for conspiracy to perform illegal actions. His fellow-conspirator was a man named Tomasso and both scoundrels received the same sentence. As the judge remarked, it is the very skill of men like the prisoners that makes them so dangerous and everyone will agree that their punishment is in no way too heavy.

INTELLECT AND FUN.

THE author of "Alice in Wonderland" is dead, to the supreme regret of those who knew him and of those to whom he was a stranger personally. It has apparently surprised many of those called on to write biographical notices of him in our contemporaries to find that the author of the best book for children in the English language was a college don, a lecturer and writer on higher mathematics. Some have even gone so far as to hint that Lewis Carroll mistook the vocation of Charles Lutwidge Dodgson when he allowed that little-known person to write on mathematics at all. And yet as a mathematical writer and teacher Mr. Dodgson was neither unsuccessful nor obscure, and there is nothing in the fact of a man being able to fascinate the world of childhood to disqualify him from the possession of intellect of a high order. It may be the case that not many mathematicians care to amuse children. The same may be said of grown men in any class of intellectual workers and it must be added that fewer still have published their work in such directions. The Christchurch don was devoted to children and especially popular in the family of the famous Dean who has just passed away at the ripe age of eighty-seven. In this congenial circle he told stories such as his clever brain devised, and grown-up people who heard them and saw how thoroughly they had captured the imagination of the children urged him to publish the stories. He did so with the result that the pseudonym under which he veiled the mathematical tutor became one of the most widely famous names in Victorian literature. That a man because he is devoted to mathematics must be destitute of humour can hardly be said. Professor Kingdon Clifford published one or two little parables well calculated to amuse children if not so famous as the Adventures of Alice or as the Hunting of the Snark. Augustus De Morgan in his Budget of Paradoxes made others besides mathematicians smile over the amazing communications made to him by those with mathematical bees in their bonnets. Professor De Morgan's work is not for children, nor is it a fairy tale any more than the Mathematical Diversions of Mr. Walter Rouse Ball of more modern date, but both teem with humour. Dr. Edwin Abbott, at the time head master of the City of London School, a senior classic and a Hulsean Lecturer, was guilty of an excellent piece of mathematical fooling entitled Flat Land, a Romance of Many Dimensions. Good fairy tales are very rare. If out of the pile of elaborately got-up works circulated each Christmas we try reading to a child we soon fall back in despair upon Grimm, Andersen, Lewis Carroll, Kingsley's Water Babies, and very likely upon Tales at Tea Time by Mr. Knatchbull-Hugessen (afterwards Lord Brabourne), a hard-working politician who declared that he composed them during dull debates in the House of Commons, and admitted that most of the debates being dull he was afforded plenty of opportunity. We may even find what we want written by a lawyer, and a county-court judge at that, in the History of Katawampus by his Honour Judge Parry. Lewis Carroll is dead, the creator of Alice; the Rev. Charles Dodgson is dead, the author of A Syllubus of Plane Algebraical Geometry and similar works; and the world is the poorer; but let us not be surprised to find that high intelligence is compatible with humour, love of children, and sympathy with their mirth.

THE ARCHBISHOP OF CANTERBURY AND THE STUDENTS OF LONDON HOSPITAL.

ON the 11th inst. the Archbishop of Canterbury visited the London Hospital in connexion with the London Hospital Christian Association which is connected with the Medical Prayer Union. The Archbishop delivered an address to a large number of students and members of the medical staff. In doing so the Archbishop made good use of his great office and set an excellent example to other ministers of religion. Many of these, we fear, are apt to regard medical men as an unresponsive audience. The existence of such Christian associations in our hospitals and the support which they have from some of our leading physicians and surgeons might make men pause in entertaining such notions of the profession to which Sir Thomas Browne, Henry Vaughan, and Dr. Abercrombie belonged. The mistake is a great one, for there are no men more ready to regard the moral and religious side of human nature or more capable of doing so than the members of the medical profession. They of all men see proofs of the unsatisfying nature of mere physical and natural good and are glad of any encouragement or help to cultivate the religious side of truth. The Archbishop did full justice to the medical profession and to the study to which it is addicted as one great means of getting at truth. He thought the study of the human body "a glorious occupation" and one standing at the very head of all natural studies. Even astronomy was not, after all, either in importance or promise for the future, to be put by the side of the study of the human body. He recognised generously the great progress such study had made of recent years and the beneficent purposes to which it had been applied. He also showed much belief in the future of the study of medicine and anticipated a time when the present progress would be spoken of as comparatively very small. Still, as in duty bound, he showed the limitations of our knowledge of truth as it enters through the senses and pointed out the temptations of the students of nature to neglect the testimony of conscience and of the spiritual faculty within us and urged them to conduct "thei

lives on high principles, to meditate on the great truths of morals, and to turn to thoughts of Him who is the source of all morality, not merely the law of all morality, but Himself the giver of it all." Medical men, whether students or practitioners, will respond to such appeals. Whatever the anatomical points which differentiate man from animals they are dwarfed by the moral distinctions. The possession of conscience, the capacity for Faith, Hope and Charity are peculiarly his and they involve religion and all its great beliefs.

THE PLAGUE IN INDIA.

As our readers are aware we have repeatedly stated that the epidemic of plague in India was a very grave matter and that it had apparently gained such a hold that its proportions in the affected districts were calculated to give rise to serious alarm. We regret to say that the latest reports from Bombay quite bear out this view. The epidemic in that city has been greatly aggravated of late; the type of the disease is of a more virulent character than that of last year and the mortality is reported to average more than 200 daily. It is scarcely necessary to add that trade is paralysed, and there is a renewed exodus of natives from Bombay. The disease also largely prevails in Poona and in the Deccan. The local government is doing all it can to deal with the epidemic, and the India Office in this country has for some time past been fully alive to the gravity of the case. The India Office, in response to a telegram from the Indian Government to the Secretary of State to that effect, has asked for the aid of additional medical men and nurses for temporary service in India in connexion with plague work and it is quite possible that still further reinforcements will be required. There has been, and still continues to be, a good deal of activity in the India Office in replying to the telegrams and applications that have been received from medical men and nurses, and those selected for employment have been directed to present themselves for medical examination as to their physical fitness for service in India.

FOOTBALL IN THE UNITED STATES.

FOOTBALL as played in the United States would seem to be a more dangerous game than it is in England. Serious and even fatal accidents more than occasionally occur in Great Britain, but they do not happen with the alarming frequency that has been the case within the last few years in the United States. A correspondent who writes to the above effect states that in England there are absent many of the brutal features that characterise the game in the States. This fact, too, is becoming generally recognised by the American public, and it has been for some considerable time a matter of grave discussion as to whether legislation should not be called upon to intervene to do away with some of the more dangerous points of American football. Georgia, the first State to take the initiative, has gone even further than this and, aroused by the death of a student as the result of injuries received at football, has passed a Bill through the House of Representatives of Georgia making it a misdemeanour to engage in the game when matches have been arranged or gate money has been demanded. This Bill passed the Lower House by an overwhelming majority and the action was endorsed by the Senate. Owing, however, to strong pressure being brought to bear upon the governor of the State he has been prevailed upon to exercise his right of veto and render the proceedings of the two Houses of Legislature of no effect. Nevertheless, although the Anti-football Bill in Georgia has not become law, yet the very fact that such a measure should have been deemed necessary by a majority of the Georgian legislators will undoubtedly exert a salutary influence on the conduct of the game throughout the entire country. The *New York Medical Record*, referring to the question, says: "In view of the great number of serious accidents on the football field between college teams it is impossible any longer to regard the game in the light of innocent recreative amusement with harmless and healthful athletics as its object. Although so-called slugging has been ruled out in the new game there is still left enough of brutal muscular force to make the alleged sport productive of the greatest variety of surgical injuries to every part of the body. In fact, there is hardly a game played in which some one of the contestants is not more or less seriously hurt. Only the severer injuries are noted, while the lesser ones serve as enlivening incidents to call forth the plaudits of an excited audience. Short of actual death on the field not much account is taken of the hundreds of young men who are oftentimes injured for life as the result of the rough-and-tumble methods of the match. ..... It is certainly time we should look the matter fairly in the face. If we wish to develop pluck, courage, endurance and strength we can do so in more healthful and safer ways." These words may be taken as the expression of the opinion of the American people at large, and it seems certain that radical changes will have to be made in the present mode of conducting the game if football is still to retain its popularity in the States.

THE SOCIETY OF PUBLIC ANALYSTS.

THE most important and interesting speech delivered on the occasion of the annual dinner of the Society of Public Analysts, which was held on the 18th inst. at the Criterion Restaurant, was that by Mr. Hudson Kearley, M.P. Early in the last session of Parliament Mr. Kearley moved an amendment to the Address from the Throne regretting that no intention was expressed of promoting legislation in furtherance of the report of the Select Committee on Food Products. As will be remembered this amendment was negatived, although some promise was given that the question would be dealt with at an early opportunity. A Bill was eventually prepared, which, however, was withdrawn in favour of a new one prepared by Mr. Chaplin and Mr. T. W. Russell. With this useless measure we dealt at length in a leading article in THE LANCET of Jan. 8th, 1898. We did not consider that this Bill was in accordance with public requirements or with the necessities of the case. We are glad, therefore, to learn from the speech of Mr. Kearley on the occasion just referred to that he is determined to move strenuously in the matter in the forthcoming session. A great national question, he said, had been trifled with by the introduction of Mr. Chaplin's Bill. The iniquity of adulteration of food was very great and it was the poor who were the greatest sufferers. It was not, as some have supposed, purely an agriculturists' question, but one which vitally affected the towns and if adulteration were allowed to continue it would thoroughly sap the commercial honesty of this country. It was a form of robbery, he added, of a most flagrant character, and if a Bill dealing with the matter were not promised in the Queen's Speech he should again feel it his duty to move an amendment to the Address. The President of the Society of Public Analysts, Dr. Bernard Dyer, in proposing the health of the Houses of Parliament also expressed regret at the fact that Parliament had not seen fit during the past year to place upon the Statute-book an Act which substantially gave effect to the recommendations of the Select Committee of the House of Commons on Food Products and Adulteration. The gathering was a very representative one, there being present the presidents of several of the learned societies. The Society of Public Analysts is to be congratulated upon the excellent work which in the interests of the

public it is doing, and there is every prospect of it continuing this good work since the membership of the society is increasing and there is never any lack of material for discussion at the monthly meetings which are held in the Chemical Society's rooms in Burlington House. Further, the issue every month of a journal known as the *Analyst*, which contains a *résumé* of all that is being done in the direction of analytical chemistry, is a valuable means of communicating to the public analyst the latest analytical methods with the view of enabling him to detect with certainty the newest frauds. We trust that a comprehensive measure will soon become law which will assist the analyst in his work and remove the great and constant difficulties which he encounters in endeavouring to carry out his duties under the present *régime*.

THE DETECTION OF ALBUMOSE IN THE URINE.

ALBUMOSE in the urine is recognised by its yielding the biuret reaction, but Salkowski, in a communication published in the *Berliner Klinische Wochenschrift* (1897, No. 17), has pointed out that urobilin gives a similar colouration, so that the test is not altogether reliable. Dr. Ivar Bang, of the Physico-Chemical Institute of the Upsala University, writing in the *Deutsche Medicinische Wochenschrift* of Jan. 13th, states that all difficulty may be avoided by the following new method which he has devised. If urine containing albumose and urobilin be saturated with ammonium sulphate and treated in a centrifuge it quickly yields a precipitate consisting of albumose, albumin, and urobilin, together with some uric acid and salts. The supernatant fluid is then poured off and the precipitate well mixed with alcohol of 97 per cent., which dissolves the urobilin, leaving the albumose, the albumin, the salts, and the uric acid. The residue after the addition of a little water is now thrown on a filter, which retains the albumin, the uric acid and the insoluble salts; the albumose passes through in the filtrate and may be recognised by the biuret reaction. When pure aqueous solutions are employed the urobilin is always so completely extracted by the alcohol that the residue gives no biuret reaction, but with urine containing a large amount of urobilin the separation may be incomplete, in which case the residue left after the extraction with alcohol is mixed with water and shaken with chloroform and a few drops of sulphuric acid, and the aqueous solution after removal of the chloroform by means of a pipette or otherwise is ready for the biuret test. If urobilin has been taken up by the alcohol it may be recognised by the fine fluorescence produced on the addition of a few drops of solution of chloride of zinc; this test is extremely delicate.

AWARD OF PRIZES BY THE PARIS ACADEMY OF SCIENCES.

UPWARDS of forty prizes varying in value from 10,000 francs to 200 francs (from £400 to £8) were awarded by the Paris Academy of Sciences at the annual meeting held on Jan. 10th. Sixteen prizes were included in the departments of anatomy, zoology, medicine, surgery, and physiology, but some were not awarded and others were sub-divided among several aspirants. The complete list is as follows:—Prix Savigny (975 francs), Prix da Gama Machado (1200 francs), Prix Montyon (one of 7500 and one of 750 francs), Prix Barbier (2000 francs), Prix Bréant (100,000 francs), Prix Godard (1000 francs), Prix Parkin (3400 francs), Prix Bellion (1400 francs), Prix Mège (10,000 francs), Prix Lallemand (1800 francs), Prix du baron Larrey (1000 francs), Prix L. La Caze (one in physiology and one in physics, 10,000 francs each), Prix Pourat (1400 francs), Prix Martin-Damourette (1400 francs), and Prix Philipeaux (890 francs). In connexion with the Prix Bréant, which is for the discovery of a cure for cholera, a grant the value of which was not stated was made to MM. Burot and Legrand. The Prix Parkin was awarded to Dr. Augustus Waller for his researches on the effects produced by certain gases and vapours on the nerves. The two Prix L. La Caze were bestowed on Professor Roentgen and Professor Lenard.

SIR FREDERIC BATEMAN'S HEALTH.

WE are sorry to learn that this well-known Norwich physician was seized a few weeks ago with an attack of right hemiplegia. As there was no loss of consciousness or defect of speech and as his subsequent progress has been uniformly satisfactory his numerous friends have good grounds for hoping that he will soon be able to resume his professional and literary work.

FRIEDREICH'S ATAXY.

A VERY interesting case is described by Dr. J. Simon in the *Progrès Médical*—interesting because the patient had been under observation for ten years and because Charcot had lectured on the case. The patient was an only child, without any inherited taint, who had at the age of two or three had some affection of the eyes and pain in the feet. The first note was to the effect that the child (at the age of ten years) had an asymmetrical skull, was frequently laughing, and seemed not very intelligent. Articulation was slow and scanning. There was absence of nystagmus, scoliosis, and pes cavus, and no defect of sensibility or affection of the sphincters was present. The knee-jerk was not obtained and Romberg's symptom was very marked. Four years later the patient was almost quite helpless, with great weakness of the legs, deformity of the feet, and marked atrophy of the muscles of the lower extremities. The knee-jerk was absent, but sensibility was normal. There was well-marked horizontal nystagmus, and the speech was slow and stuttering. There was no scoliosis, but some deformity at the level of the first dorsal vertebra. The patient died suddenly, being found dead in bed, but no condition of the organs could be found to account for this. The spinal cord was unusually small, and combined sclerosis was found affecting the posterior columns, the pyramidal tracts and the direct cerebellar tract. Changes were also found in the cells of the grey matter.

TREATMENT OF SPRUE.

WE would draw the attention of our readers, especially those who are likely to come in contact with patients who have resided in India or China or who themselves reside in those countries, to a letter in our issue of Jan. 15th from Dr. Charles Begg. Dr. Begg is especially entitled to speak in the treatment of sprue as during his residence in China he has treated a very large number of cases. He advises moderately large (5 gr. night and morning) doses of yellow santonin dissolved in salad oil. He insists on the observance of certain details. The white santonin as usually sold in this country he has found to be quite useless. It is rather difficult to obtain the yellow santonin, but if the white preparation be allowed to stand exposed to the sunlight for some hours (preferably under a glass shade) it will soon turn yellow. What the chemical difference between the two is Dr. Begg is unable to state, but it makes all the difference in the efficiency of the drug. Another point is that the santonin should be administered dissolved in oil. As powder it does not act nearly as well. The explanation Dr. Begg offers is that as a powder the chief effect of the drug is

produced in the stomach, which is useless, but when given in oil the desired action is obtained. He states that when thus prescribed the unpleasant effects of the drug are not experienced, even when it is given in large doses, and his experience confirms him in his belief "that all cases yield to it." Before commencing this treatment a gentle purgative or enema should be ordered, and if the attack be acute the patient should rest on a bed or sofa. The routine treatment already described should be followed for a week and the average patient requires nothing more. During this period the patient should be kept on a milk diet and afterwards gradual latitude may be allowed. It is hoped that Dr. Begg's method may be given an extended trial. Sprue is the cause of death of a very large number of persons, more especially in China, and if treatment can be adopted which will diminish this death-rate great service to humanity will have been done by him.

THE BRITISH MEDICAL JOURNAL: THE NEW EDITOR.

AT the meeting of the Council of the British Medical Association on Jan. 19th Dr. Dawson Williams, Assistant Editor, who has been connected with the editorial department of the paper for seventeen years and has on many occasions discharged the duties of Editor, was unanimously appointed Editor. At the same time Mr. C. Louis Taylor, who has been Sub-Editor for the last eleven years, was appointed Assistant Editor. We congratulate these gentlemen and also the Council of the Association upon the appointments.

WE understand that Dr. Charlton Bastian has resigned the post of Professor of Clinical Medicine in University College and Physician to University College Hospital. Having just completed thirty years of service to these institutions, and finding it difficult to spare the time and energy necessary for the discharge of his duties, he is desirous of making way for others. He still retains, however, the post of physician to the National Hospital for the Paralysed and Epileptic.

THE Registrar-General's returns of mortality for last week show that the deaths from measles in London, which had been 112, 166, and 130 in the three preceding weeks, rose again last week to 134. They were as numerous, save one, as the deaths from diphtheria, scarlet fever, and whooping-cough combined. There surely must be some great neglect somewhere to account for the fatality of a disease which, though severe, is not intractable.

DR. HERBERT KNAPP, one of the medical officers recently sent out to Bombay on plague duty, has unfortunately contracted the disease. His attack, however, has been mild, no anxious symptoms having shown themselves, and he will probably be convalescent in about a week.

THE King's College Hospital students' dinner will be held on Thursday, Feb. 10th, at the Holborn Restaurant. Professor A. W. Hughes, F.R.C.S. Eng., will preside. Any past students wishing to be present should apply for tickets to the Honorary Secretary, Dinner Committee, at the hospital.

THE Lettsomian Lectures of the Medical Society of London will be delivered at the rooms of the society, 11, Chandos-street, Cavendish-square, on Feb. 7th and 21st and March 7th, at 8 30 P.M., by Mr. John H. Morgan, M.A. Oxon., F.R.C.S. Eng., the subject being "The Affections of the Urinary Apparatus in Children."

DR. J. A. CAMPBELL has forwarded for our perusal several interesting letters from important persons in the medical world which have been addressed to him in approval of his letter upon "The Hardships and Risks of the Medical Profession and Those Engaged in the Treatment of Bodily and Mental Disease," which appeared in THE LANCET of Dec. 18th, 1897.

A GENERAL meeting of the Association of Medical Officers of Schools will be held on Wednesday, Jan. 26th, 1898, at 3.30 P.M., at the rooms of the Medical Society, Chandos-street, Cavendish-square. Dr. Eustace Smith, President, will be in the chair, and a paper will be read by Dr. Greville Macdonald on Some Points in the Physics of Adenoids. Visitors are invited to attend.

DR. EDWARD MARRIOTT COOKE has been appointed by the Lord Chancellor a Commissioner in Lunacy. Dr. Cooke has been for some years medical officer and superintendent of the Worcester City and County Asylum.

THE Board of the Medical Faculty of King's College, London, have reported to the Council of the College that they are in favour of the scheme for a new University of London embodied in the Bill of 1897.

DR. DONALD W. C. HOOD has succeeded the late Dr. Witham Wadham as examining physician to the Queen's foreign and home service messengers.

OCCUPATIONAL MORTALITY.[1]

SECOND NOTICE.[2]

HAVING discussed, in our last issue, Dr. Tatham's remarks concerning the mortality of unoccupied men we now proceed to consider, of necessity very briefly, the statistics which he adduces respecting the comparative healthfulness of certain definite occupations. And, first, we observe that the mortality of occupied males generally differs considerably in various localities. This is only what might have been expected to follow from the fact, which is emphasised in a later portion of the report, that men engaged in different occupations die in very unequal proportions. Thus, for example, it is known that the general mortality is relatively high among men employed in the manufacture of iron, steel, lead and copper goods and also among those engaged in certain unhealthy trades; consequently the mortality among occupied men in industrial districts as well as in London is excessive, whilst in the agricultural districts where tillage of the soil constitutes the staple employment of the people, the corresponding mortality is generally low. At the census of 1891 London contained nearly 1¼ millions of occupied males above fifteen years of age and the agricultural districts about an equal number, whilst the industrial districts contained above one and three-quarter millions at the same ages; more than half of the occupied males in England and Wales are therefore included in these three sections of the population. At each of the age-groups from fifteen years upwards the highest death-rates among occupied males occur in the industrial and the lowest in the agricultural districts, London occupying an intermediate position. At ages from twenty to twenty-five years the death-rate of occupied males in London corresponds with the rate throughout the country, but at all other ages the London rates, as well as the rates in the industrial districts, are in excess. Speaking generally, the mortality of occupied males in industrial districts exceeds by one-third part the average for all occupied males at ages

[1] Letter to the Registrar-General on the Mortality of Males engaged in Certain Occupations in the Three Years 1890-92. Supplement to the Fifty-fifth Annual Report of the Registrar-General. By John Tatham, M.A., M.D. Dub. Eyre and Spottiswoode. 1897.

[2] The first notice appeared in THE LANCET of Jan. 15th 1898.

from forty-five to sixty-five years, whilst the corresponding mortality at the same ages in the agricultural districts falls below that standard by the same proportion. At ages above sixty-five years, however, the difference becomes much less, the mortality in the industrial districts being less than one-fifth part above, and that in the agricultural districts being only one-twelfth part below, the standard. In the report under notice Dr. Tatham gives sufficient reasons for regarding the interval between the 25th and 65th years as the period of life during which the effects of occupation are most conspicuous; in the case of the majority of occupations, but not in all, this is also the period of life which measures with the nearest approach to accuracy the duration of man's greatest capacity for effective work. It has therefore been designated the "main working period of life," and by the respective rates of mortality within these limits the healthfulness of the various occupations is tested in the present report. Space would fail us did we attempt to follow Dr. Tatham in his description of the methods adopted to avoid error in the calculation of standard mortality figures for the several occupations. It must suffice to say that in his introductory remarks, to which we referred with approval in our previous notice, he has set out in detail every step of the necessary calculations and has clearly explained the meaning and mode of application of the term "comparative mortality figure," an expression which is employed very frequently throughout the report. The average mortality among the entire occupied male population being taken at 1000 the following are the proportional mortalities due to the principal causes. The most fatal disease of all is phthisis, which accounts for 192 deaths, next follow pneumonia with 107 deaths, diseases of the nervous system with 102 deaths, and diseases of the heart with a like number of deaths. Thus rather more than half of the total mortality among men aged from twenty-five to sixty-five years is due to the four causes or groups of causes just enumerated. Of the remainder bronchitis, pleurisy, and other respiratory diseases contribute 117 deaths; alcoholism with liver disease, 42; urinary diseases, 44; and cancer, 47 deaths. To occupied males generally phthisis and diseases of the respiratory system are the most fatal of all maladies in London and in the industrial districts. In the metropolis these two headings contribute about equally to the total mortality; on the other hand, the industrial districts show a lower mortality than does London from phthisis, but the difference is more than made up by the heavy death-toll from respiratory diseases. In the agricultural districts the mortality figure due to phthisis is less than half that of London and the figure for respiratory diseases is still lower. These two diseases together cause nearly half of the total mortality amongst occupied males in London and in the industrial districts and more than one-third part in the agricultural districts.

We now come to that section of the report which treats in detail of the mortality incidental to the separate occupations; having regard, however, to the limited space at our disposal we can only glance in the present article at a few of the more prominent topics discussed in this important section. Among the 100 occupations dealt with in the report the clerical profession experience the lowest and publicans the highest general death-rate, after due correction for age-constitution of the respective populations, the former having a mortality figure of only 533, whilst innkeepers in the industrial districts are credited with the enormous figure of 2030. Farm labourers, gardeners, and, indeed, the agricultural class generally are likewise among the occupations with very low rates of mortality, whilst cutlers, file-cutters, saw- and needle-makers sustain rates of mortality which are not much below those of publicans. Reference to Table 4 in the report shows at once to what cause the excessive mortality of the publican class is due. They die seven times as fast as other occupied males from alcoholism and almost seven times as fast from diseases of the liver, six times as fast from gout, and more than double as fast from diseases of the urinary organs, from diabetes, and from suicide. Among publicans in London the case is in some respects even worse. Their mortality from all causes is nearly double the average in other occupations; they die ten times as fast from alcoholism, nearly four times as fast from liver disease, and more than twice as fast from urinary affections and from suicide. Among London publicans the mortality from phthisis, from rheumatic fever, and from suicide is two and a half times, that from diabetes is three and a half times, and that from gout is five and a half times as great as it is among occupied males generally. Dr. Tatham, however, is careful to insist that the entire excess of mortality to which we have referred must on no account be attributed to occupation exclusively; some part of it is doubtless due to local conditions, for the mortality of occupied males in London is considerably greater than that of occupied males throughout the country—e.g., from all causes the excess is 20 per cent., from alcoholism it is 38 per cent., from liver disease 11 per cent., from urinary diseases 37 per cent., from phthisis 50 per cent., and from suicide 29 per cent. In the industrial districts likewise publicans sustain a mortality from all causes which is more than double the average and a mortality from alcoholism, liver disease, phthisis, &c., which does not greatly differ from that of the same class in the metropolis; but as in the case of London publicans the excessive mortality among publicans in the industrial districts must be regarded as in some part due to local conditions. Although in the agricultural districts the general mortality of publicans does not exceed the average rate by more than about one-third part, their mortality from alcoholism and from liver diseases is between five and six times that of occupied males generally. The calculated figures, therefore, for publicans in the agricultural districts considerably understate the truth, for the influence of locality is greatly in their favour as is shown by the low mortality of occupied males generally in those parts of the country. For example, the mortality from all causes among occupied males in the agricultural districts is 28 per cent. below that of occupied males throughout England and Wales, whilst the mortality of publicans in those districts is 41 per cent. in excess of the same standard. The most noticeable features in the vital statistics of file-cutters, cutlers, and needle-makers is their exceptional liability to death by phthisis and other diseases of the respiratory system. Taking together the two forms of disease we find that these operators experience a mortality which is considerably more than double the average rate among other occupied males. Dr. Tatham has not omitted to investigate fully the mortality of our own profession. In the ten years ending with 1891 the number of medical men increased by 25 per cent. as against 3 per cent. only in the interval between 1871 and 1881. The comparative mortality figure for physicians and surgeons is 966 as compared with 821 for lawyers and 533 for the clergy. If the lifetime of medical men be divided into two stages it appears that since the year 1861 their death-rate has increased at ages above forty-five years and has decreased at the earlier ages. Comparing the mortality of medical men at decennial age groups in the 1891 period with that in 1871 it is found that there has been a considerable decrease at the age twenty five to thirty-five years, that at ages thirty-five to forty-five and forty-five to fifty-five there has been a slight increase, and at ages above fifty-five years a considerable increase. This limitation of increase of mortality almost exclusively to the higher ages suggests that it may be partly due to the influenza epidemic which in the year 1891 was generally at its height and which is known to have been especially fatal to persons beyond the prime of life. For further and most interesting information concerning the mortality of the medical profession we must refer our readers to the report itself.

(To be continued.)

REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD, 1896-97.

SECOND NOTICE.[1]

IN our last issue we dealt in the main with Appendix A of this volume, and we now propose to confine our attention to Appendix B which is devoted to a consideration of certain bacteriological questions of great interest to the epidemiologist. The relations of bacteriology to the problems of preventive medicine are of necessity intimate, and, although the field-working epidemiologist must be careful not to be governed in too great a degree by the findings of the bacteriologist working under purely laboratory conditions, he must, nevertheless, have due regard to such findings, and

[1] The first notice was published in THE LANCET of Jan. 8th 1898.

this the more when he sees that the bacteriologist is endeavouring to imitate the conditions under which the micro-organisms may be thought of as subsisting in nature.

In the volume before us this latter aspect of the question has evidently been kept prominently in view, and hence the work which is reported upon becomes correspondingly enhanced in value. Let us take for instance Dr. Klein's researches into the behaviour of Koch's cholera vibrio in non-sterile sea-water, and in oysters stored therein. It will be remembered by some of our readers that in the report on Oyster Culture in Relation to Disease Dr. Klein pointed out that the vibrio under these conditions rapidly underwent remarkable morphological changes and became so modified both in regard to its cultural and physiological properties as to leave but few traces of its origin, while the descendants of these modified organisms possessed all the characteristics of their parents. In the volume now under review Dr. Klein records the results of further investigations in the same direction. It was ascertained that these profoundly changed organisms soon reached a condition of relative stability, and that by no means at present discovered was it possible to bring about a reversion of these modified organisms to the conditions of the stock with which the researches were commenced. These results, which should be studied in detail, are most interesting, and they illustrate among other things the difficulty and uncertainty which there may be in determining the existence or non-existence of the cholera microbe under conditions which may have modified its behaviour in its morphological, cultural, and physiological aspects.

The researches, too, of Dr. Sidney Martin, to which we referred in our last notice, are very instructive and suggestive, more especially as there are perhaps indications that the bacillus of enteric fever is undergoing a phase of increased activity in this country. Dr. Martin found that in certain organically contaminated soils, which were obtained from localities where enteric fever is more or less endemic and which were sterilised before use, cultures of the enteric fever bacillus, when sown in the centre of a patch of such soil and incubated at a temperature of 37° C., rapidly spread from the centre to the periphery of the patch and the bacilli in question were to be recovered therefrom after an interval of no less than fifteen weeks, their vegetative properties being still intact. It was found, too, that the bacillus coli communis under similar conditions flourished in and pervaded the soil; at, however, a temperature of from 15° to 19° C. and when exposed to diffused daylight—i.e., under circumstances more nearly approaching those found in nature—the bacillus, though less active than when under the higher temperature, retained its vitality and grew from the centre towards the periphery. In marked contrast with these results were those obtained with "virgin" soil—i.e., soil procured from localities which had never been under cultivation or manured. In this case neither the enteric fever bacillus nor the bacillus coli communis manifested growth. It has to be borne in mind that in all these experiments *sterilised* soil was used so that the inhibiting or enhancing influences of the numerous organisms present in different soils remains, as far as these experiments go, undetermined. Probably, however, Dr. Martin is now engaged in further observations in this direction.

The work, too, of Dr. Robertson, the present medical officer of health of Sheffield, which we noticed some weeks ago in our columns, throws some light on this aspect of the question. Dr. Robertson went out into the fields to pursue his investigations, and the results which he obtained were of a sufficiently encouraging nature to justify further research. In this case the bacilli were exposed to all the atmospheric and other influences with which in localities in which the disease is endemic they probably have to contend.

The behaviour of the enteric fever bacillus in milk has been matter for Dr. Cautley's consideration. He found that under the ordinary conditions in which milk reaches, and is kept by, the consumer, the bacillus in question is capable of maintaining its existence, though it did not appear that the bacillus underwent any multiplication under these circumstances; it would seem rather that the bacilli in question rapidly undergo diminution when kept in milk stored in the usual fashion. These bacilli will maintain their existence in sterile milk curdled by the addition of the bacillus lactis, as also in sour milk, facts which show the possibility of the existence of the enteric fever bacilli in curd cheeses.

Dr. F. W. Andrewes, working on the flora of the human intestine, found that sporo-bearing anærobic bacilli were not normal inhabitants thereof, nor are they to be detected in the dejecta of what may be termed casual diarrhœa.

In connexion with the much debated question as to the cause of "return cases" of scarlet fever Dr. Klein tells us, as a result of his researches on the desquamating cuticle and on the urine of patients suffering from this disease, that he has been unable to isolate from the one or the other any organism which he could regard as being the cause of the disease in question, a negative conclusion which, in so far as the urine is concerned, will have interest for those who are investigating the relation of scarlet fever to polluted soil. Dr. Klein has also devoted much attention to a consideration of the microbes associated with variola and vaccinia, and in this connexion he has examined as a cultivating medium certain eggs which had been previously inoculated by Dr. S. M. Copeman with the material of either variola or vaccinia. Dr. Klein was apparently unable to procure from these eggs what he regards as the essential organism of either of these diseases, but it is interesting to note that in the course of his experiments Dr. Klein practically confirms Dr. Copeman's valuable investigations as to the destructive influence of *diluted* glycerine on what have been called the "extraneous" organisms of vaccine lymph. In further attempts to cultivate on ordinary agar the microbe of variola from an emulsion of small-pox crusts and undiluted glycerine Dr. Klein obtained an organism which he calls the bacillus albus variolæ, and by the inoculation of cultures of this bacillus into a calf he procured results which certainly make it worth while to pursue the investigation. Some observations and experiments by Dr. Klein in connexion with the bacillus of bubonic plague complete a volume for which our thanks are in large part due to the medical officer of the Local Government Board.

LEGISLATION AS A REMEDY FOR MEDICAL GRIEVANCES.

A MEETING of the South-West London Medical Society was held on Wednesday, Jan. 12th, when Mr. Brudenell Carter replied to the address delivered by Mr. Victor Horsley on "The Medical Acts of Parliament: as they Are and as they Ought to Be" (see THE LANCET, Jan. 1st, p. 1). Mr. T. A. Ives Howell presided. Mr. Carter's address will be found on page 201 of this issue.

The CHAIRMAN, after thanking Mr. Carter for his address, said there was nothing in the nature of a personal attack or of personal feeling against Mr. Carter in Mr. Horsley's address before them on Dec. 8th. He thought it but right that he should let Mr. Carter know that.

Mr. BRUDENELL CARTER said he heard that statement with very great pleasure. He had been informed that a very gross personal attack had been made on him at the meeting referred to, but he had vainly endeavoured to obtain any details about it and it was for that reason that he appeared before them. He hoped Mr. Horsley would accept the withdrawal of any expressions which had been based on that foundation.

Mr. VICTOR HORSLEY said: I had hoped to have heard from Mr. Carter a systematic attack on my position of Dec. 8th. My position then was practically this that by the Acts of Parliament under which we work it can be seen by anyone who can read that the only qualification is registration. We work because we are registered and that is our statutory guarantee. I quoted, you remember, Section 6 of the Medical Act, 1886, which is headed "Effect of Registration," which is described in the margin as detailing the privileges of registered persons, and recounts as the first privilege that a registered medical practitioner shall be entitled to practise medicine, surgery, and midwifery in the United Kingdom. If those words mean anything at all they mean that the man in the street who is not registered is not entitled to practise. That position has actually not been touched by Mr. Carter. My first point, therefore, is that he has not entered into practical conflict with me upon the matters I brought before you. But he has gone into many points that I must naturally reply to. Let me say that I quite agree with Mr. Carter that the worst form of competition we have to deal with in a practical way is the prescribing chemist and the sale of patent medicines—I never said anything to the contrary.

I hold that they ought to be punished and that the Acts enable us to punish them. Then as to the question, Who is to carry that out? It is no good going to the police, though they ought to do it. If we cannot find some means of stimulating the Public Prosecutor to do his work we must do what we can ourselves. The profession should not be taxed to carry out this work; but are we to sit still and do nothing? In the first place, Mr. Carter has made a very personal attack upon myself with regard to the comments which I have thought fit at one time or another to make upon the action of the President of the General Medical Council. It is not true to my knowledge that any person, decent or indecent, left the room when I spoke at Carlisle. Then Mr. Carter says that a passage was not printed by the journals. It may be so, but I do not recollect it. I sent a full copy of the paper to Mr. Carter, so that he knew, as far as I knew, the contents of the paper as it was published in the *British Medical Journal*. Since my election to the Council I have found that precisely the same evils I complained of at Carlisle have been carried on and I have felt it my duty to publish the fact in a protest to the profession because I have done all I can constitutionally to stop these evils. I have asked the President to call the Penal Cases Committee together to deal with the matters to which I drew his attention, but he has refused to do so; and he has, I submit, acted improperly towards me by not only refusing to carry out this constitutional measure, but has actually written to me, a member of the Council, asking me to forego my right to address him personally. That was a personal matter between me and the President, but it is now becoming a matter of public interest, which I have published in the *Clinical Journal*[1] too late, I fear, for it to appear the same week in the other journals. Now my position is this: If the President does things of this kind am I to sit still and say nothing while knowing what is going on? Then Mr. Carter dealt with the construction of the Council, its constitution and functions. He told us that the profession is not ruled by the Council. I do not know what the word "rule" conveys to Mr. Carter, but I know that the Council has the power to strike me off the Register, and as I know that only by virtue of being on the Register I can practise medicine and surgery and midwifery I feel that I am ruled by the General Medical Council. Mr. Carter also told us, as I understood him, that the Medical Act was passed primarily for the protection of the public. I admit that it was passed for the protection of the public, but I contend that the Council is placed in a position by the Government to fairly and squarely protect the interests of both profession and public, and I should like to refer to an address I gave to the students at Sheffield three years ago in which I pointed out that the genuine interests of the profession were the material interests of the public. Mr. Carter said the object of the Act of 1858 was to secure the uniformity of medical diplomas; there can be little doubt about that and also of the uniformity of examinations upon which those diplomas are based. But no such uniformity has been obtained and cannot until we get the one-portal system. With reference to the fact that I made a mistake the other night about Sir Christopher Nixon's motion which Mr. Carter has corrected I admit I ought to have said not a complete majority of the corporations but an overwhelming majority. Whether that is a sample of my general inaccuracy or not I do not know. Then with regard to the control of the profession, the section dealing with the control of the profession is certainly drawn too strictly. It gives statutory power to the Council only to strike a man off the Register but no statutory power to publicly reprimand him. Offenders have been reprimanded by the President, though possibly Mr. Carter may tell you that is not so, and I was told by the legal advisers that such a thing was impossible. I pointed out to Sir William Turner a statement in the Minutes showing that a certain practitioner had been severely reprimanded by the President. It has been done whether it is legal or not, but probably no one would care to go to the High Court and complain of having been reprimanded on the ground that Clause 29 was drawn too strictly. Then we come back to Section 40 and the preamble of the Act, failures of prosecution and the great advantages that the Council has hitherto had in having certain gentlemen as its legal advisers. Unfortunately every single criticism of those legal advisers that I could make in the past session was made *in camerâ* and under ordinary circumstances one's lips on such subjects would be sealed; but as Mr. Carter has seen fit to break that secrecy in order to make an attack upon me personally as to my ability to interpret Acts of Parliament I must also lift the veil sufficient to defend myself. The point was one of vital importance: it was on the question as to whether certain wholly unqualified persons, and one especially—a man who had successfully evaded the law for fifteen or sixteen years—was to be placed on the Register. The Council arrived at a resolution dead against its legal advisers and it turned out that the legal advisers had suggested that the Dentists Act could be tortured by a certain reading of Section 37 so as to enable unqualified persons to be pushed into the Register. Mr. Carter's point was this. When I had made a speech, not of an hour as he says (it was certainly not more than ten minutes), I asked Mr. Mackenzie whether he agreed. Mr. Mackenzie replied, "That is not my opinion." Of course he did; he replied that to everything I brought forward and he was defeated on every single point by the Council itself. Now, gentlemen, we come to the point about the comma, which was in fact a colon; the point at issue was this. Section 37 of the Dentists Act was divided into two parts by this colon and I was maintaining that it was to be read as one section from top to bottom. Mr. Carter has given you to understand that I represented to the Council that the section was separated into two parts by intent. On the contrary, I got Mr. Mackenzie into a trap, I got the Council to recognise Section 37 of the Dentists Act as an entity. I said to Mr. Mackenzie, "Of course I know that there are no stops in an Act of Parliament, but here I see one, a colon," and I asked if this divided the section into two parts. Mr. Mackenzie replied, "Oh, of course it is well known that there are no stops in an Act of Parliament; the whole thing must be read as one." I replied that that is exactly what I wanted. The burden of my contention was this: Mr. Mackenzie had employed this section as the basis of his advice to the Executive Committee. The section was to the effect that any person who had been articled as a pupil and had paid his premium to a dental practitioner entitled to be registered under this Act in consideration of receiving from such practitioner a complete education shall, if his articles expire before the 1st day of January, 1880, be entitled to be registered under this Act as though he had been in *bonâ-fide* practice before the passing of the Act. Then follows provision for the Council to specially order the name of such *bonâ-fide* pupil to be put on the Register. When you apply the case to the Act what do you find? That actually this man in his application stated that he was a foreigner; that he had had no dental education; that he had been apprenticed to a dentist who was another foreigner who was not entitled to register under the Act at all. In other words he had in no sense complied with the words of the Dentists Act and it was on these grounds, wholly against the legal advisers, and not on the grounds Mr. Carter has represented to you, that the Council came to their decision. I would not have said a word of that if Mr. Carter had not broken the secrecy of the Council proceedings in order to attack me. I tried to show you that the Medical Acts contain a section to provide a penalty for unqualified practice—namely, Section 40. I can only say that the General Medical Council did last year successfully prosecute under that section and obtained full penalties. The man used a title in the same way that all unqualified persons do for the purposes stated in the Act. It states in the Act that a person uses a title to imply that he is registered under the Act. We find under Section 34 that a legally qualified medical practitioner is a person registered under this Act and nobody else so that the prosecution of "Dr. Bell" shows that Section 40 is a penalty clause preventing unqualified persons from practising. It is assumed by those who suggested that the only provision of the Medical Acts is to protect a title that as long as you successfully show that a person falsely pretended that he had a title you could convict him. But the experience of the Defence Union is that magistrates come forward and say, Where is your proof of practice? Now, to give Mr. Carter an object lesson as to the value of some statements of the legal advisers. One of the legal advisers on one occasion did refer to the want of success of the Medical Defence Union; but the same legal adviser forgot that the Medical Defence Union employed him as counsel in the case, and not only that, they employed him in the case when it went into the High Court but also

[1] At Mr. Horsley's request we publish his statement in full this week on page 253.

to review the summons in the magistrate's court. That same magistrate, when the case was brought before him, when it was proved by a certificate that the person had quoted a title though she had been struck off the Register, said to the prosecutors "This is not enough proof; you do not show that she was practising." That prosecution failed because the legal adviser to the General Medical Council did not indicate to us in what way it would be successful although we paid him to do so. The Medical Defence Union had spent its money freely to test what could be done for the medical profession and if occasionally they were defeated as a general rule they were very successful. I must say that the legal advisers to the General Medical Council are the last persons to be quoted as critics of the legal policy of the Medical Defence Union. It is true the General Medical Council are going to take important steps to test the Act, but I cannot tell you why. Then there is another matter on which Mr. Upton is going to write—the use of the word "qualification." I pointed out that Mr. Upton used the word "qualification" in a popular sense. The word "qualification" is defined in the Act of 1886. I brought the matter forward and after a discussion it has been left to the legal advisers and they are going to bring forward their opinion at the next session in May; until then we must wait for any pronouncement of importance. Mr. Carter suggested—but I know he did not mean it—that I wished the preliminary examinations to be unduly severe in order to prevent overcrowding in the profession. To that statement I would simply return a direct negative. I never said anything of the kind. Such a comment is unjustifiable. The giving up of the Duke of Richmond's Medical Bill was a very great loss to the profession; it provided for a one-portal system—the very thing which was wanted. Of course it was opposed, but who by? The Corporations. The same opposition that we shall meet again, but which we will overcome. Mr. Carter himself stated that the leaders of the profession made such statements that the Duke of Richmond got into despair. I should think he did with such views as the corporate bodies represent. Then Mr. Carter said that the Apothecaries Society could not take a part in altering the conditions under which they lived. I do not see why. They obtained an Act not very long ago called the Apothecaries' Amendment Act to enable them to strike persons off their list of Licentiates, and if another Act were passed they would be placed on the same footing as any other body. I am quite at one with Mr. Carter in thinking that if the corporations had the money to spare they should spend some of it in prosecuting unqualified persons; but I should like to point out that the Medical Defence Union prosecutes most. Finally, I must once more refer to the sentences with which Mr. Carter concluded his address because I have been so frequently misrepresented in the journals and in public places. Mr. Carter says I have made a practice of vituperating those leaders of the profession who have been honoured by the Sovereign. He refers to the criticisms which I have published from time to time and intend to publish if necessary on the President of the General Medical Council. THE LANCET, at the time of the last election, made a statement in its leading article that I had made statements which I could not substantiate. In the next issue of THE LANCET I substantiated every one of them. It is nothing to do with me who is President of the General Medical Council, but if it comes to my personal knowledge that a public official is not, in my opinion, fulfilling the moral or written laws of the body to which I belong I shall certainly publish the fact in order to acquit myself of any personal responsibility.

A short discussion followed and votes of thanks to Mr. Carter and Mr. Horsley terminated the proceedings.

DEATHS UNDER ANÆSTHETICS.

ON Dec. 17th, 1897, a fatality occurred during the administration of ether. The patient, a woman aged forty-four years, who suffered from "internal cancer," was admitted for operation into the New Hospital for Women, Euston-road. It was considered that an operation would afford a chance of the prolongation of her life. At the time of admission the patient was in a very exhausted condition. Mrs. Keith, the anæsthetist to the hospital, administered nitrous oxide gas, followed by ether, which combination of anæsthetics the patient took well. After the expiration of thirty minutes and while the operation was in progress the patient became so collapsed that the surgeon was requested by the anæsthetist to desist from further surgical procedure and she at once complied. Resuscitative measures were at once applied, but the patient died after about ten minutes from circulatory failure arising from surgical shock and collapse. We have not received any particulars as to the means adopted to restore the woman or whether hæmorrhage was severe. In all such cases posture, warmth, and guarding the patient from the effects of hæmorrhage are undoubtedly the most important points for attention both before and during the operation. The fact is established that both chloroform and ether cause a fall of body temperature and so increase shock unless the trunk and limbs are kept wrapped in flannel or cotton-wool. The fall of temperature under severe abdominal and vaginal operations again is considerable. A profound anæsthesia allows of a considerable drop in arterial tension which has been shown to be least when the limbs and pelvis are placed at a higher level than the head. Again, saline transfusion of Ringer's fluid certainly lessens the collapse in such cases when the bleeding, always severe, has been excessive. We do not doubt that such a severe operation undertaken when the patient was in a dangerous state of exhaustion was as far as possible safeguarded by every precaution and we regret we have not been favoured with the particulars of the methods employed. A death following the administration of ether is reported from the Corbett Hospital, Stourbridge.[1] The patient, aged thirty-nine years, was admitted on Sept. 21st, 1897, suffering from fracture of the right femur. A prolonged application of splints led to a stiffness with adhesions about the knee-joint which were to be dealt with under an anæsthetic on Dec. 8th. Ether was given from a Clover's inhaler; one ounce was used. The induction was slightly longer than usual but was marked by no unusual phenomena. No sickness occurred during or after anæsthesia and no respiratory spasm was seen. There was a short struggling stage followed by true anæsthesia when the operation, a very brief one, was rapidly performed. The patient was then taken back to the ward and the corneal reflex was noticed as being present. Voluntary movements were also said to have been seen. Later he opened his eyes "and seemed to recognise an onlooker." After this no special supervision was exercised. A hospital porter engaged in the ward noticed the man was breathing in gasps; this was twenty minutes after the patient had been taken from the operating theatre and half an hour subsequent to the first administration of the ether. The surgeons were fetched from the operating theatre and found by that time that the man was dead. "He was lying with his head thrown back so that no possible difficulty of breathing could have arisen due to his position. The eyes were open and the lips slightly parted; nor was there any sign of any struggle for breath having taken place." The ether was analysed and found to fulfil the British Pharmacopœia tests for purity. The necropsy revealed that the right heart was distended with venous fluid blood. The lungs also were loaded with blood as were all the viscera. We cannot but feel that the fact shown at the post-mortem examination seemed to indicate that the man died from asphyxia and not from heart failure. No doubt patients appear to resume consciousness after an anæsthetic and even mutter semi-intelligible words and recognise familiar faces. They then sink into deep sleep just like the stupefaction of the drunken, and in this condition the tongue falls back and the slightest cause—a little thick mucus or the dropping of the jaw—will completely prevent ventilation of the lungs taking place. Two very similar cases occurred in the practice of a French surgeon, who promptly opened the trachea and forced air into the lungs with the result that both patients survived. In his cases chloroform had been given. A death under chloroform occurred at the Infirmary, Kidderminster. The patient, a boy, aged eight years and nine months, suffered from a congenital hernia upon which it became necessary to operate for its radical cure. The house surgeon, Mr. Oliphant, M.B., C.M. Edin., administered chloroform from lint. In about eight minutes the breathing ceased, the operation not having then been commenced. Upon artificial respiration being adopted the child appeared

[1] We are indebted to Mr. Hammond Smith, honorary surgeon to the hospital, and Mr. Edgar Collis for the notes of the case.

to rally, but sank almost immediately and died within two minutes. The necropsy showed no organic disease. At the inquest the coroner asked Dr. Oliphant whether an inhaler was not a better means of giving chloroform and whether that substance was not the most dangerous of the anæsthetics in common use and received the answer that inhalers were not satisfactory for giving chloroform and that it was a matter of opinion as to which was the most dangerous anæsthetic. We so often hear that the Scotch schools never meet with casualties under anæsthetics because they always use chloroform and prefer to dispense with any apparatus that we can readily accept the replies given to the coroner as representing the views current among the majority of even the thoughtful alumni of those great centres of medical training. A glance over the long list of casualties under chloroform will unfortunately show that whatever charm Syme exercised during his life has not survived to his followers, and overdosage with chloroform proves as fatal in the hands of those who hail from beyond the Tweed as well as "down south." A death from chloroform contained in the A.C.E. mixture occurred at the General Hospital, Birmingham, on Dec. 15th. The patient, a girl, aged five years and ten months, suffered from hypertrophied tonsils and post-nasal adenoid growths. She was given the A.C.E. mixture by Mr. McCardie, one of the anæsthetists to the institution, and tonsillotomy was performed. As consciousness was returning some chloroform was given to enable Mr. Haslam, the operator, to remove the growths. She died at once from respiratory failure in spite of restorative measures. A necropsy showed absence of organic disease. The anæsthetist regarded the death as one from cardiac failure due to reflex inhibition by irritation of the vagus. We are not told the posture of the child or the method employed.

REPORT ON THE BUBONIC PLAGUE IN BOMBAY.[1]

SUCH a vast amount of interest has been taken in the progress of the plague in Bombay that the report issued by Brigadier-General Gatacre will be received with eagerness by the medical and lay communities alike. We naturally review it mainly from a professional point of view and taken as a whole we think that the chairman of the committee, together with his colleagues, may congratulate themselves upon having drawn up an able and complete account of the plague in so far as they were officially connected with it. In their report they have confined themselves almost entirely to the period between March 17th and June 30th, 1897. It follows therefore that from this report we learn but little about the epidemic when it was at its height in January of last year and nothing as regards its progress after the end of June. It is difficult indeed to gather whether the malady had been checked or was still raging were it not for a reference to "the decline" as a reason for a reduction in the plague pay of the non-commissioned officers and soldiers employed by the committee. With these exceptions, however, the report is most admirably drawn up and for medical readers especially contains a mass of interesting and readable information.

Chapter I. is headed "General Report" and includes a brief description of the operations conducted by the municipal authorities up to the time when the committee was appointed. Great difficulty was at this time experienced in arriving at the true plague mortality, the chief being the dread entertained by all classes of the population of being removed to hospital and the fear of having their houses invaded by a disinfecting staff.

On Oct 6th, 1896, the municipal Commissioner issued a proclamation to the effect that all cases were to be segregated, their houses disinfected, by force if necessary, and their sick to be taken to hospital. This order was unfortunately badly, or rather insufficiently, worded and raised a storm of protest. It was not explained that the relatives of the patient would be allowed to attend him or that the prejudices of the various castes in the matter of food, &c., would be respected. Lord Sandhurst's letter to General Gatacre was a great contrast to this. He explained that measures were to be taken to suppress and prevent the spread of bubonic plague. These measures should comprise an organisation for: (1) the discovery of all cases of plague; (2) the treatment of all cases in hospital; and (3) the gradual segregation as far as possible of the probably affected. The letter continues: "These are the objects to the attainment of which your energies should be directed. I am sure I need not do more than indicate that in all cases of obstinacy or misunderstanding on the part of those whom it is our endeavour to benefit persuasion and gentleness should be used; that the privacy of women should be disturbed as little as possible and only by women, and that the caste and religious usages of the people should be treated with all consideration." The organisation and disposition of medical officers is then given and explained by means of coloured plans.

The instructions given to the nursing staff are also detailed and special attention is rightly drawn to the courageous and self-denying conduct of the All Saints' Sisters, Mazagon, who nobly carried out a great portion of the nursing duties, the general supervision of the nurses being undertaken by the Reverend Mother Superior of that community. The Bandora Sisters (*Filles de la Croix*) also rendered most valuable service. The difficulties of bringing the Mahomedans to reason in reference to segregation and hospital treatment are then described and the measures adopted for their removal duly recorded. We must not forget to note that M. Haffkine in his minute attached to the report of the Mauser Committee expressed his opinion that the measures of disinfection carried out by the health officer before the Commission commenced its work "were in accordance with the best recognised principles of sanitation and were not in need of alteration."

In Chapter II. the distribution of the hospitals with the staff attached to each is detailed, together with a statistical, and in most cases a careful, medical report of the cases treated in each. These reports are most valuable and in a separate volume carefully prepared charts are recorded giving the temperature curve, pulse, and respirations in a very large number of cases. To those who are interested in the clinical characters of the outbreak this chapter will yield most valuable information.

Chapter III. gives a very excellent summary of the "Medical Aspect of Plague," derived from the views expressed by the medical officers working under the committee. The forms and types of plague are distinguished by some into simple bubonic and pneumonic plague only, by others as plague (with buboes and without buboes), all the variations in these two forms being grouped under symptomatic evidences of complications associated with one or other form. Reviewing opinions generally the following is given as a rational classification of forms of plague:—

1. With enlarged glands (gravity according to symptoms and severity of attack).	Femoral. Inguinal. Axillary. Cervical. Tonsillar.
2. Without enlarged glands (almost always fatal).	Septicæmic. Pneumonic. Mesenteric, enteric, or gastro-intestinal. Nephritic. Cerebral.

The signs and symptoms of these various forms are then given, followed by a section on "Ready Method of Diagnosing Plague."

With regard to treatment the report states: "It is difficult to recommend any particular line of treatment with confidence, for it is often seen that a plan of treatment which succeeds in one case totally fails in another. It may be shortly summed up as nutritive, stimulant, antiseptic, antipyretic, and local." Calomel was largely used as were the ice-bag and ice-packing for hyperpyrexia, the bath being considered dangerous, as "the danger of sudden failure of the heart's action makes it imperative to avoid movement on the part of the patient as much as possible."

Considerable interest attaches to the reports of M. Haffkine and Dr. Yersin's methods of treatment, neither of which, however, were attended with the success which had been hoped for, but this failure need not in any way prevent further investigations being made on the same lines.

M. Haffkine adopted his well-known method of cultivating the pathogenic bacillus in suitable media, killing the germs by heat and then injecting increasing quantities of

[1] Report on the Bubonic Plague in Bombay. By Brigadier-General W. F. Gatacre, C.B., D.S.O., Chairman, Plague Committee, 1896-97. With Plans. Bombay, 1897. Printed at the "Times of India" Steam Press.

the soluble toxins whereby mild reactionary symptoms of plague were produced. Dr. Yersin injected the antitoxin prepared from the serum of an immunised horse. The next five chapters describe the methods employed for the detection of cases of plague and for the prevention of the spread of the disorder, and include "land traffic inspections," "sea traffic inspection and observation camps," house-to-house visitation and disinfection, and the report by Veterinary-Major J. Mills, A.V.D., on the Pandora slaughter house. A list of foreign scientific missions is then given and reports follow on the outbreak of plague in the Kolaba and Cutch Mandvi districts.

Chapter XII. is an excellent summary of the views of the Commission. Reference is made to those who lost their lives whilst working under the committee. These are remarkably few in number, a matter of high praise to those who had the superintendance of the preventive measures adopted by the staff for their own protection. At Cutch Mandvi Nurse Herne died after only a few days' illness, as did also Sister Elizabeth (*Fille de la Croix*), who nursed at the Government Hospital at Mahim. Two hospital assistants caught the disease, one of whom recovered. Three military ward orderlies are recorded as having died of the disease contracted while engaged in hospital work.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE fourth meeting of the Royal Commissioners was held in the Moses Room of the House of Lords on Monday last, January 17th. All the Commissioners were present. The London County Council were represented by Mr. Balfour Browne, Q.C., and Mr. Freeman, Q.C.; the Corporation of the City of London by their Remembrancer; the Middlesex County Council by Sir Richard Nicholson; the Hertfordshire County Council by Lord Robert Cecil; the New River Company by Mr. Pope, Q.C., and Mr. Claude Baggallay, Q.C.; the Kent Waterworks Company by Mr. Littler, Q.C., and Mr. Lewis Coward; the Lambeth, East London, Grand Junction, and West Middlesex Waterworks Companies by Mr. Pember, Q.C.; and the Chelsea Waterworks Company by Mr. A. G. Rickards.

Sir ALEXANDER BINNIE, chief engineer to the London County Council, was examined by the Chairman. He said that he had been for some years a member of the Council of Civil Engineers and was a Fellow of the Geological Society, that he had constructed waterworks in India and had for fifteen years held the office of water engineer and manager to the city of Bradford. For many years he had had occasion to consider the question of the London water-supply. In answer to questions by the Chairman the witness gave an account of the area and population of the administrative county of London, of the area called the Outer Ring, and of that called Greater London. He afterwards gave particulars of "Water London," the area actually supplied by the metropolitan water companies and that over which they have Parliamentary rights to supply. The administrative county of London extends for 121 square miles and the population has enormously increased during the last few years. Thus in 1861 the population was 2 808 862; in 1871, 3,266,987; in 1881, 3 834 194; in 1891, 4,232,118; and in 1896, 4,433,018. The area of the county of London is contained within the larger area of "Greater London," which is the name given by the Registrar-General to the area included within the metropolitan and City police districts. This area comprises all the parishes wholly comprised within the circle of fifteen miles radius from Charing-cross and all other parishes of which any part is included in the circle of twelve miles radius from the same centre. It includes the whole county of London and with the area around includes a total of 701 square miles. The population of Greater London in 1861 was 3,222,720; in 1871, 3,885,641; in 1881, 4,766,661; in 1891, 5,633,806. The district outside the county of London and within the area of Greater London is generally spoken of as the "Outer Ring." The question of the water-supply of London necessarily affects the districts immediately surrounding it, and the witness had prepared a table showing the increase of population not only in the county of London and Greater London but in the Outer Ring, and to prevent mistakes which might otherwise have arisen the district of Penge was included within the county of London and deducted from the Outer Ring. The table handed in by the witness to show the increase of population is here given.

Having given these details of the population the witness described at some length the areas supplied by the eight metropolitan water companies and explained the situation of these areas. (Full information on this matter has lately been published in THE LANCET.) In addition to the supply given by the eight metropolitan water companies small areas included in "Water London" are supplied by independent companies and by local authorities. At Enfield, with a population of about 90,000, the people have an independent water-supply, and at Tottenham, with a population of 30 000, the area of independent supply is about two and a half square miles. Part of the area of distribution of the Croydon Corporation and of the Sutton Water Company is also included in "Water London" and an area of about five square miles within the Parliamentary district of the Kent Water Company is supplied by the Limpsfield and Oxted Water Company. The South Essex Water Company supplies an area of about forty-eight square miles; there are also independent supplies at Barnet, in the Colne Valley, at Cheshunt, at Ware, and at Hoddesdon. In the case of the metropolitan water companies the only area in London north of the Thames in which there are any overlapping supplies is a small district in Marylebone and Paddington, north of Bayswater-road, supplied by the West Middlesex and Grand Junction Companies. No details as to this were given.

In the year 1896, under the Staines Reservoirs Act of that year, a joint committee, called the Staines Reservoirs Joint Committee, was appointed by the New River, Grand Junction, and West Middlesex Companies. Under the powers of the Act the committee is empowered to take water from the Thames above Bell Weir, Staines, to pump it into reservoirs and to convey it into a distributing reservoir near Hampton for the use of the three companies. The works for which powers under this Act were given did not include any arrangement for filtration but simply for the storage of the water. Last session the New River Company obtained power to construct filter-beds and a pumping station at Kempton Park near this distributing reservoir and to convey water from the filter-beds to their district through a main of 42 in. in diameter and of a length of about twenty miles.

With regard to the water derived from the River Lee by the New River and East London Companies the witness pointed out that in 1892 the average daily quantity taken

Population of "London," "Outer Ring," and "Greater London," 1861-1891.

	1861.	1871.	Decennial increase		1881.	Decennial increase.		1891.	Decennial increase.		Increase in 30 years.		
			Numbers.	Per cent.		Numbers.	Per cent.		Numbers.	Per cent.	Numbers.	Per cent.	—
1	2	3	4	5	6	7	8	9	10	11	12	13	
Administrative County of London	2,808,862	3,266,987	458,125	16 3	3,834,194	567,207	17·4	4,232,118	397,924	10 4	1,423,256	50·7	Administrative County of London.
Outer ring (excluding Penge) ...	413,858	618,654	204,796	49·5	932,467	313,813	50 7	1,401,688	469,221	50·3	987,830	238 7	Outer Ring (excluding Penge).
Greater London ...	3,222 720	3,885,641	662,921	20 6	4,766,661	881,020	22·7	5,633,806	867,145	18·2	2,411,086	74·8	Greater London.

was 56,415,779 gallons, in 1893 53,208,379 gallons, in 1894 52,738,522 gallons, in 1895 71,927,191 gallons, and in 1896 51,717,328 gallons. For some years the companies had practically taken the whole flow of the Lee in dry weather and did not send down sufficient water for the purposes of navigation.

Mr. PEMBER pointed out that the companies were not bound to send down compensation water.

Sir ALEXANDER BINNIE replied that as a matter of fact the companies took the whole of the water of the river and that they pumped up water from the Thames at Bow Creek. He maintained that the Lee Conservators really afforded no protection to the public because they were "practically overshadowed" by the water companies.

Mr. PEMBER suggested that the County Council should apply for a *mandamus* if the Lee Conservators did not do their duty.

The CHAIRMAN remarked that what appeared to be happening was that the companies were pumping up water from the Thames to make good the deficiency of the Lee.

Mr. PEMBER claimed that with the exception of 5,400,000 gallons daily reserved for purposes of navigation the New River and the East London Companies were empowered to take the whole of the remaining flow of the river and it was contended at the time of Lord Balfour's Commission that as a matter of fact they had never taken the full quantity of water to which they were entitled.

Sir A. BINNIE, in reply to the Chairman, said that he could not altogether agree with the finding of Lord Balfour's Commission that the Thames and Lee were satisfactory sources of supply and he thought that at least part of the future supply should come from other sources. Water into which a large amount of sewage was poured was not a good source of supply. It was impossible to give up suddenly the present sources of supply and in his opinion it would be well to supplement the present supply from other sources.

The Commission then adjourned.

On the following day the examination of Sir ALEXANDER BINNIE was continued, when he repeated that any fresh source of supply which he proposed would be supplementary to the quantity of water which the companies were now authorised to take from the Thames. In answer to the chairman he said that a considerable supplementary supply would be required in ten or fifteen years, that the works should be put in hand as soon as possible, and that he would look for the source of his supplemental supply to a district in Wales. He stated that he had made an estimate of the cost of this supply, the London County Council having been at work upon the whole question of the London Water Supply since the date of Lord Balfour's Commission. Certain recommendations of this Commission had engaged the particular attention of the London County Council. Lord Balfour's Commission had reported that, on considering what steps should be taken to ensure the proper treatment of the water-supply of London, they had recognised that the intakes must be subjected to certain important processes before the water could be brought into good condition for delivery and consumption. Upon these processes of subsidence and filtration the quality of the water when delivered depended largely so that the thoroughness with which they were carried out regulated the quality. It did not come within the terms of their reference to lay down what should be the exact regulations as regards filtration, what should be the proportionate area of the filtering-beds, the depth of sand, the frequency of renewal, or the rate at which the water should be allowed to percolate; nor as regards the subsidence tanks, how many days storage should be deemed sufficient so as to obviate the necessity of taking in turbid storm water and to allow of due settlement; but they stated that the provision for these purposes differed enormously in different companies, and in some of them was to their mind inadequate. Regulations on these matters, they said, should be drawn up after competent inquiry, and adherence to the regulations should be strictly enforced. This enforcement should be entrusted to the public water examiner, who should have the legal right of entry into all the waterworks, and the duty of reporting periodically as to the due observance of the conditions laid down. With reference to the River Lee the Commission reported that when "dealing with the river as a whole this abstraction is, in our opinion, too great with the storage now in existence, but if other reservoirs were constructed adequately increasing the storage capacity on well recognised lines, the taking of 52½ million gallons a day may be continued. The taking of the water should be under regulations similar in character to those suggested for the Thames, viz., the first flush of floods to be rejected, and in dry weather no water to be abstracted when the flow has run down to a quantity hereafter to be determined." Everything went to show, in the opinion of the witness, that the total flow of the Thames was gradually being absorbed by the water companies and it was of the first importance that the following recommendation of Lord Balfour's Commission should be put into effect:—"We think that regulations could be framed under which the quantity we suggest could be taken not only without reducing the flow of the river on the rare occasions of exceptional drought to the present *minimum* but in such a way as to secure that the volume of water left in the river at these times would be substantially greater than it is under existing conditions.' Under this recommendation the water companies would have to refrain from drawing water from the Thames during dry seasons and must add to the natural outflow of their storage reservoirs. Mr. More, the engineer to the Thames Conservancy, had stated that if less than 200,000,000 gallons were left in the river below Richmond it would be rendered almost unnavigable at low water. Again, the beneficial effects produced on the river by the London County Council's works for the treatment of sewage would be rendered valueless if the present abstraction of upland water was allowed. Sir Alexander Binnie declined to decide what the storage capacity of any future reservoir must be. To provide for the future population estimated by Lord Balfour's Commission 90 days' storage capacity of 300,000,000 gallons would be required—that is to say, it would require a storage capacity of 27,000 million gallons instead of 17,500 million gallons.

In answer to the CHAIRMAN Sir ALEXANDER BINNIE said that the cost of going to Wales for the water would be from £90,000 to £95,000 per million gallons.

The Commission then adjourned until next Monday.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting of subscribers to the above Fund was held on Thursday, the 13th inst., at the house of the Treasurer, Sir W. H. Broadbent, Bart., 84, Brook-street, Grosvenor-square, and was attended by a considerable number of members of the medical profession including the members of the committee and the honorary secretaries, Dr. Samuel West and Mr. Joseph White. In the unavoidable absence of the President, Sir James Paget, Bart., the chair was taken by Sir W. H. Broadbent.

The financial statement for the year and the report of the committee were presented to the meeting and from these it appeared that annual subscriptions amounting to £962 6*s.* 6*d.* and donations amounting to £405 4*s.* 10*d.*, making a total of £1367 11*s.* 4*d.*, had been received during the year and distributed in grants to 167 out of 216 applicants. The grants varied from £5 to £18 each. The amount received from interest on invested capital had been £2255 and this had been, as usual, devoted to the payment of annuities of £20 each to 107 recipients who had attained the age of sixty years and upwards.

Ten annuitants of £20 each had been elected during the year and one annuity of £15 had been granted to the widow of a medical man in accordance with the provisions of the Dunlop Gift. Owing to investment of recent legacies one new annuity has been added to the permanent list and the number on the list now amounted to 108.

The Grant Department had still caused the committee very great difficulty and anxiety. This part of the Fund is entirely dependent on the income derived from annual subscriptions and donations and this always falls very far short of its requirements. What the Fund most urgently requires is a large increase in its regular annual subscribers.

The books and accounts of the Fund had been exhaustively audited by the honorary chartered accountant and the working expenses had been remarkably small. Great regret was expressed at the resignation of Mr. J. T. Mould, F.R.C.S. Eng., who had been chairman of the committee for many

years and who had been compelled to retire through ill health.

Votes of thanks were carried by acclamation to the committee, to the treasurer, and to the honorary secretaries and to the auditors, the honorary chartered accountant and the medical press, and a special vote of thanks to Sir William Broadbent for his courtesy in the chair and for his great interest in the welfare of the Fund terminated the meeting.

THE PENAL POWERS OF THE GENERAL MEDICAL COUNCIL: A REPORT TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

MR. VICTOR HORSLEY, one of the Direct Representatives, has asked us to publish the following report to his constituents upon the Penal Powers of the General Medical Council:—

LADIES AND GENTLEMEN,—I sincerely regret being obliged to make the following report to you, but the urgent nature of the matters composing it and my inability to secure the safety of those of your interests which are endangered gives me no option but to discharge my personal responsibility as a Direct Representative Member of the General Medical Council.

A. Re *the Legal Affairs of the Council and Action of the President thereon.*

In a paper which I read at the annual meeting of the British Medical Association at Carlisle in 1896 I drew attention to the dangerously arbitrary powers possessed by the President of the General Medical Council, and I showed how the business of the Council, especially the prosecution of certain offenders against the Medical Act, was adversely affected by the exercise of such powers. Four months after the publication of my paper the General Council commenced a revision of the penal procedures of the Council, and ultimately removed from the President the personal exercise of most of his power, and vested it in the Penal Cases Committee. The fact that these precautionary measures have unfortunately not been sufficiently observed, or were not made sufficiently stringent, has led to a repetition in a very aggravated form of the evils to which I drew your attention at Carlisle in 1896. The circumstances of the present case are as follows. At the last session of the Council—viz., November, 1897—the Council decided that a flagrant example of the special class of offenders against the Medical Act referred to above should be legally prosecuted on certain lines and on certain definite evidence which was before them. At the end of December, 1897, from facts which came to my immediate personal knowledge, the conviction was forced upon me that unless a very radical change were at once effected in the conduct of this legal business an unsuccessful issue would result. Under these circumstances I felt it an imperative duty to write to the President informing him of the facts and asking him to call the Penal Cases Committee as soon as possible in order that the existing confusion might be rectified, he alone being invested with the power of calling such committee together out of session.

He replied that (1) such a proposal was impracticable; (2) that he did not intend to call the committee; (3) that he had referred the solicitor's statements (upon which my opinion as expressed above was formed) back to the same source for his opinion thereon; and (4) had instructed the same solicitor to take the opinion of eminent counsel upon facts already laid before the Penal Cases Committee, and upon the report of which the Council had decided to act. Thus the President, after making a statement (No. 1) that was not correct, and refusing to take the only constitutional course open—namely, that of summoning the responsible committee—assumed the direction of affairs and reopened the matter which had already been decided upon by the Council, and in addition assumed the responsibility of ordering the great and useless expense of taking legal means to rediscover facts already known to and settled by the Council itself, with the concurrence of the legal assessor in the Session of last November.

On receiving the President's letter I immediately communicated the facts to two leading members of the Penal Cases Committee, one of whom I am aware endeavoured to persuade the President to summon the committee, but was also unsuccessful. I therefore wrote again to the President (who had not answered my former letter) asking him once more to call the committee and to withdraw his instructions to the solicitor as being a waste of public money. By way of reply to that letter I have only received a note from the President improperly suggesting that I should in future address my communications not to him (the only responsible person), but to the Registrar or the solicitor, neither of whom of course have any authority or powers. The present situation, therefore, is that the President, with what in my opinion amounts to a reckless disregard of fact and of constitutional right, is allowing the most important and serious work of the Council affecting the interests of the whole profession to remain in the hands of those who would appear to be unable to satisfactorily prosecute it. And further that he has without any authorisation whatsoever from the Council ordered a large and useless expenditure of the public funds of the Council.

My object in obtaining a meeting of the Penal Cases Committee was to have the whole circumstances properly investigated by the body competent to deal with them and thus to secure matters of such difficult and delicate nature being properly dealt with. That object has been frustrated by the action of the President. As the Council does not meet until May I am unable to call in question the President's conduct in the proper place before that date and am therefore powerless to do anything to remedy either the present state of this special penal business of the Council or the expenditure in which the President has involved the Council. I am therefore constrained to make this public statement in order that the members of the profession may be made aware of the manner in which their interests are being menaced and of the steps I have taken to protect their interests. That I have not succeeded is, I venture to point out, not my fault, but is to be attributed to the power still left by the Council in the hands of the President alone and arbitrarily exercised by him.

B. Re *Practice in Italy.*

I desire at the same time to report to the electorate the following matter which is the outcome of an official letter sent by the President of the General Medical Council to the Privy Council on July 1st, 1897, since I can obtain no answer from the President of the General Medical Council, to whom I have addressed the communication reprinted below. A grave legal error contained in his letter impugns the whole position of all medical practitioners in the kingdom, and being now published will if possible be made use of by every enemy to the profession and every unqualified person who trades on the ignorance and fears of the public. It is necessary, therefore, to immediately correct the error referred to and to warn the profession of the injury which the President's official pronouncement may, if left unchallenged, inflict upon its members. The circumstances of the case are as follows. The Italian medical profession are seeking to obtain from their Government a statutory protection of qualified medical practice in Italy and desire to make it compulsory upon any British subject practising medicine in Italy to pass the Italian State examination. Our countrymen who are so practising in Italy applied last summer to the General Medical Council to interest itself in their behalf. As no reciprocity is possible, since we do not admit foreign degrees to our Register except as additional titles, the General Council ordered a small committee to draft a letter to the Privy Council upon the subject. This letter is the one to which I take exception. It is signed by Sir R. Quain as President of the General Medical Council, and after recounting in a way which in my opinion is erroneous and misconceived the respective positions of a British practitioner resident at home and abroad, dilates at length on the injustice of the proposed Italian legislation and suggests amendment of the Medical Acts in order that reprisals may be efficiently made when necessary by our Government. The letter is to be found on page 185 of vol. xxxiv. of the Minutes of the Council which has just been published. Immediately after this letter came to my notice I wrote to the President in the following terms, but have received no answer thereto beyond a formal acknowledgment:—

[COPY.]

25, Cavendish-square, W., 30th December, 1897.

SIR,—I beg to draw your attention to the following matter, which is of urgent public importance and I submit requires prompt correction.

On page 185 of the Minutes of the Executive Committee (meeting Nov. 22nd, 1897, vol. xxxiv., Minutes of the General Medical Council)

is given a copy of a letter signed by yourself, dated July 1st, 1897, and forwarded to the Privy Council in consequence of a resolution of the Council of May 27th, 1897 (see Minutes of the General Medical Council, vol. xxxiv., p. 68).

In this letter occurs the following passage (page 186, line 17): "The reason assigned for the proposed change is that Italian doctors are not permitted to practise in other countries of Europe, including the United Kingdom, unless they possess the diplomas of the countries in question.

"In contravention of this statement the General Medical Council desire to remind the Lord President that foreign medical men are under *no restrictions in Great Britain as* far as practice is concerned, and that the only disabilities under which they labour, if they do not possess a diploma registrable under the Medical Acts, are (*a*) that they cannot recover fees by legal process or sign certain certificates; (*b*) that they are unable to give *medical* evidence in courts of law; and (*c*) that they may not hold certain public offices. *They are absolutely free to practise their profession*, not only upon other foreigners, as British medical men may at present practise in Italy, but also *upon the Queen's subjects*, and upon foreigners resident within the Queen's dominions."

Since the name of no foreigner can be placed on the Register except he possesses a British qualification this statement assumes that any unregistered person may unrestrictedly carry on medical practice in the United Kingdom. In other words, that registration under the Medical Acts, 1858 and 1886, is of no value as regards practice and that the Apothecaries Act of 1815 does not apply to foreigners practising in the United Kingdom, though unregistered and unqualified.

I beg to call your attention to the following considerations which show that the statement in your letter to the Privy Council is incorrect and that foreign practitioners who are unregistered and unqualified persons cannot practise unrestrictedly medicine, surgery, and midwifery in the United Kingdom.

1. The Medical Act of 1886 (49 and 50 Vict., cap. 48) contains a section, No. 6, which is headed "Effect of Registration" and in the marginal index is stated to describe the "privileges" of registered persons. This section in its commencement states as the first privilege that "on and after the appointed day a registered medical practitioner shall, save as in this Act mentioned, be entitled to practise medicine, surgery, and midwifery in the United Kingdom." Thus the privilege of practising medicine in the United Kingdom is conferred by the Act on registered persons alone in precisely the same way as the second privilege conveyed in the section—viz., that of recovering professional charges by process of law—is alone bestowed upon registered persons. The punishment of persons who commit breaches of this section and who practise without being registered is provided for in Section 40 of the Medical Act, 1858. An unregistered foreign doctor, therefore, practising in the United Kingdom would come under the restrictive penalties of these sections of the Medical Acts.

2. The Apothecaries Act, 1815, provides that persons who do not hold the registrable qualification—viz., Licentiateship of the Society of Apothecaries—and who nevertheless practise medicine shall be punished under the penal section, No. 20. This statute has been successfully employed for the punishment of unregistered and unqualified foreigners (including Italians) and others attempting to practise medicine in this country.

An unregistered foreign doctor, therefore, practising in England and Wales would come under the restrictive penalty of the Apothecaries Act, 1815.

The incorrectness of your statement cannot fail to have a gravely prejudicial effect on the manner in which the Government, i.e., the Privy Council, will regard the existing Medical Acts, and also directly compromises the value of any official letters which may be sent in the future by the General Medical Council to the Privy Council. Under these circumstances I shall be much obliged if you will kindly inform me as soon as possible what steps you propose to take to correct the erroneous impression conveyed by your letter, which has unfortunately now become public property by being published in the current volume of the Minutes of the Council.

I take this opportunity also of giving notice that at the next Session of the Council I shall move that a letter of rescission, withdrawing your letter of July 1st, 1897, be forwarded to the Privy Council.

Yours faithfully,

VICTOR HORSLEY.

Sir Richard Quain, Bart., M.D.,
President, General Medical Council.

In my opinion it is clear that a certain injury to the authority and reputation of the Council cannot fail to have been inflicted by the President's letter, and it is equally certain that we cannot obtain a *tabula rasa* until the Council meets and formally repairs damages by admitting that the letter sent to the Privy Council by the President was inaccurate.

However, by giving publicity to the matter and early contradiction to the President's statement, I think the profession will be able to prevent any injurious use being made of it during the five months that must elapse before the May Session.

VICTOR HORSLEY,
Direct Representative for England and Wales.

UNIVERSITY OF LONDON.

MEETING OF CONVOCATION.

THERE was a comparatively small attendance of graduates at the meeting of Convocation of the University of London held on Monday, the 17th inst., notwithstanding the fact that the agenda gave notice of a motion to approve of the London University Commission Bill, 1897, the passage of which would place the reconstitution of the University in the hands of a Statutory Commission. Whether from a feeling of indifference to the fate of the University or from weariness at the delays that have been encountered in securing a change already approved by a large majority in a full meeting of Convocation, or perchance from lack of interest in a scheme which does not in the opinion of some meet the real wants of educational London, it is yet not hopeful that so few should attend on such an occasion. For it might be inferred that even the compromise which was supposed to have satisfied the scruples of those members formerly opposed to any scheme, including the chairman of Convocation and Dr. Napier, whose election to the Senate was due to his antagonism to the proposed changes, had not aroused much fervour. Certainly it had not disarmed opposition, as was shown in the course of the proceedings when an amendment, moved by Mr. Littler, Q.C., and seconded by Mr. Fletcher Moulton, Q.C., which aimed at deferring a decision on the question until the whole of Convocation could be given the opportunity of expressing an opinion, received 42 votes as against 76 recorded on the other side.

The proceedings commenced by the presentation by Mr. J. B. BENSON, LL.D., B.A., of the report of the Special Committee appointed on May 13th, 1896, "to prepare a memorandum to any Statutory Commission or to prepare amendments to the London University Commission Bill." The Committee reported that they had drawn up and presented amendments to the Bill of 1896 which was withdrawn and that they had met for the same purpose in regard to the Bill of 1897 but had not time to carry out their instructions. They also reported the proceedings of the conference which took place on Dec. 6th, 1897, between the senate and representatives of the institutions and bodies named in the report of the Cowper Commission. Dr. Benson's motion for the reception of the report was met by two amendments, regarded by some speakers as of a purely obstructive character, the one (not seconded) averring that the special committee had given no information of any proposed amendments to the Bill, and the other, which was duly moved, seconded, and rejected by a large majority, pointing out that as no Statutory Commission had been appointed there was no occasion for the Special Committee to present a report. These preliminary obstacles removed,

Dr. BENSON then moved, in accordance with the recommendation of the Special Committee, "That this House accepts the scheme embodied in the London University Commission Bill, 1897." In his speech he pointed out in what respects the measure was the result of the compromise, which had secured for it far larger support than any previous Bill, and he considered the time had come for controversy to cease.

Mr. BLAKE ODGERS, Q.C., B.A., in seconding the motion, stated that the measure secured three cardinal points—namely, that there should be one University and not two, that by it the standard of degrees would not be lowered and the interests of external students not prejudicially affected. He also thought that the time had come for finally settling the question and for closing controversy.

Mr. LITTLER, Q.C., B.A., in a vigorous speech contended that in so important a question it was only right that every member of Convocation should have the opportunity of expressing his opinion and that the vote of a small section of the graduates resident in London ought not in justice to be taken as representative of the views of the whole body. He therefore moved an amendment to the effect that before any decision was arrived at means should be taken to ascertain the views of all the members of Convocation.

Mr. FLETCHER MOULTON, Q.C., M.A., seconded this amendment, appealing to those present to do this act of justice to the large constituency who were unable to attend a meeting in London.

It was, however, pointed out that the Charter did not allow of such a "referendum," although of course it was open to any persons to unofficially obtain an expression of opinion on any subject of interest to Convocation.

Mr. T. B. NAPIER, LL.D., opposed the amendment and was at some pains to justify his changed attitude, affirming that the compromise was a just and reasonable one and that it safeguarded the interests of Convocation and the external students.

Mr. SILVANUS THOMPSON, D.Sc., followed on the same side and laid stress on the fact that Convocation in the only mode legally open to it had on a previous occasion

carried a resolution by a large majority in favour of the re-constitution of the university.

Mr. HEBER HART, LL.D., who supported the amendment, found it difficult to reconcile Dr. Napier's present declarations with loyalty to the cause he formerly championed.

Sir J. FITCH, M.A., in a brief but weighty speech, urged that were the amendment carried this scheme for the organisation of education in London would be indefinitely postponed; whilst he pointed out that the only legitimate way of obtaining the opinion of Convocation was at its meetings, just as in Cambridge and Oxford Universities, where on important questions members attended to record their votes from all parts of the country.

Mr. JOSEPH, LL.B., in support of the amendment, urged that there would be no more difficulty in obtaining the votes of provincial members on this question than there is at the election of senators and declared that this very question had been more than once decided by the return of members to the senate who had expressed themselves opposed to re-constitution.

A vote was then taken on the amendment, which was declared to be lost, and on a division there were—Ayes, 42; Noes, 76. The original resolution was then put and declared carried, the supporters of the amendment not voting. The report of the Standing Committee was then presented and the House shortly afterwards stood adjourned.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

A MEETING of the Council of the Metropolitan Hospital Sunday Fund was held on Jan. 14th at the Mansion House, when the Earl of STAMFORD presided. On the motion of the Hon. SYDNEY HOLLAND, seconded by the Right Hon. W. LIDDERDALE, the Committee of Distribution for the year was constituted as follows: The Lord Mayor, M.P., Sir Sydney Waterlow, Sir Savile Crossley, Sir Stuart Knill, Captain Cundy, Mr. Robert Grey, Mr. Herman Hoskier, Mr. F. H. Norman, Dr. Sedgwick Saunders, and Mr. Alfred Willett. The General Purposes Committee consisting of the following gentlemen was re-appointed: The Lord Mayor, Sir Sydney Waterlow, The Chief Rabbi, Archdeacon Sinclair, Canon Fleming, Canon Ingram, Prebendary J. F. Kitto, the Rev. Donald McLeod, the Rev. R. F. Horton, the Rev. J. H. Rigg, the Rev. Dr. Marks, the Rev. W. H. Harwood, Sir Henry C. Burdett, Colonel Francis Haygarth, Mr. Herbert Brooks, Mr. F. C. Carr-Gomm, Mr. A. L. Cohen, Dr. J. G. Glover, Dr. C. J. Hare, Mr. Albert G. Sandeman, Dr. W. Sedgwick Saunders, and Mr. Wakley.

It was arranged that the Special Committee for Surgical Appliance Orders and Hospital Letters should consist of any two Members of the Council acting with the secretary. Sir E. Hay Currie and Mr. Richard B. Martin, M.P., the honorary secretaries, were re-appointed as was Mr. H. N. Custance, the secretary. Messrs. W. H. Pannell and Co. were chosen as auditors of the Fund.

The Committee of Distribution met on the same day and agreed to issue their appeals to hospitals seeking to participate in the Fund within the next week.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On an Inspection of the Witney Urban District, more especially in relation to the Disposal and Removal of House Refuse and Night Soil, by Dr. W. W. E. FLETCHER.—The small town of Witney (population 3110), in Oxfordshire, appears to have been for some time anxious to discontinue its system of public scavenging and to adopt instead by-laws imposing upon householders the duty of removal of excrement and refuse from premises. Application for by-laws in this sense was made by the Witney District Council to the Local Government Board, who refused sanction to the proposal until the question had been locally investigated by a medical inspector. Dr. Fletcher has no difficulty in showing how it is that the present system of public scavenging has come to be unsatisfactory. This system in Witney consists merely of an undertaking by the district council to remove the contents of any pails placed in the street by the householder before 9 A.M. The necessity of supplementing public scavenging of this sort by periodical inspections in order to prevent accumulations of refuse and excrement on the premises of careless householders appears not to have occurred to the district council; and hence many Witney folk, without hindrance from the sanitary authority, permit objectionable and recurring nuisances to arise near their dwellings. The remedy proposed by Witney, however, does not hold out much hope of amendment, and Dr. Fletcher, who takes this view of the case, recommends the adoption of a more efficient system of public scavenging side by side with adequate sanitary inspection. Dr. Fletcher draws attention to other grave sanitary defects in the town. In particular we learn from his report that the soil of the place is to a high degree porous, that the water-supply consists of shallow wells in this porous soil, and that near many of these wells privy cesspits and excremental accumulations abound. Warning of the danger attendant on these conditions has already been afforded by a serious outbreak of enteric fever. Unfortunately the necessity for amendment seems to remain in large measure unrecognised by the district council. A pure public water-supply, which obviously constitutes the most pressing need of the place and which apparently could be had at no excessive cost, is rejected on the ground of saving the rates—an economy which may well prove as extravagant as such attempts at saving generally are. So, too, with questions of sewerage. Witney being on the Thames watershed something has to be done with its sewage to save legal difficulties with the Thames Conservators. But so far the proposal to construct adequate works of sewerage within the town has met with strong and successful local opposition. It is clear that the multifarious insanitary conditions of the Witney Urban District call for serious and sustained efforts on the part of its district council and its medical officer of health.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Burgh of Crieff.—During 1896 there were registered 116 births and 85 deaths, giving a birth-rate of 23·6 and a death-rate of 17·3 per 1000 of the population; the last census (in 1891) showed the population to be 4901. Dr. James Gairdner in his annual report mentions that 24 cases of infectious disease came to his knowledge during the year, comprising 2 of diphtheria, 9 of erysipelas, 12 of scarlet fever, and 1 of continued fever. He gives an unfavourable account of the condition of the slaughterhouse and devotes considerable space to showing that the melting of old lead into ingots is a business altogether unsuitable for being carried on in a populous locality. He found that fumes from these operations were deposited at a distance of 120 ft. from the workshop and contained appreciable although minute amounts of lead, tin, zinc, copper, arsenic, and manganese.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6944 births and 4432 deaths were registered during the week ending Jan. 15th. The annual rate of mortality in these towns, which had been 24·9 and 21·4 per 1000 in the two preceding weeks, further declined last week to 20·6. In London the rate was 22·9 per 1000, while it averaged 19·0 in the thirty-two provincial towns. The lowest rates in these towns were 12·2 in Huddersfield, 12·6 in Cardiff, 12·9 in Birkenhead, and 13·3 in Swansea; the highest rates were 23·7 in Plymouth, 25·3 in Liverpool, 28·9 in Norwich, and 29·6 in Wolverhampton. The 4432 deaths included 525 which were referred to the principal zymotic diseases, against 651 and 546 in the two preceding weeks; of these, 225 resulted from measles, 120 from whooping-cough, 72 from diphtheria, 42 from "fever" (principally enteric), 34 from diarrhœa, and 32 from scarlet fever. No death from any of these diseases was recorded last week in Wolverhampton; in the other towns they caused the lowest death-rates in Bradford, Plymouth, Portsmouth, and Nottingham, and the highest rates in London, Derby, Oldham, and Sheffield. The

greatest mortality from measles occurred in London, Croydon, Brighton, Derby, Oldham, Halifax, and Sheffield; from scarlet fever in Huddersfield; from whooping-cough in Derby and Portsmouth. The mortality from "fever" showed no marked excess in any of the large towns. The 72 deaths from diphtheria included 44 in London, 6 in Birmingham, 4 in Cardiff, and 4 in Liverpool. No fatal case of small-pox was registered during the week under notice, either in London or in any other of the thirty-three towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 3253, against 3619, 3572, and 3450 on the three preceding Saturdays; 215 new cases were admitted during the week, against 222, 273, and 239 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 700 and 533 in the two preceding weeks, further declined last week to 516, and were 255 below the corrected average. The causes of 55, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Bradford, Leeds, Hull, and in fifteen other smaller towns; the largest proportions of uncertified deaths were registered in Cardiff, Birmingham, Liverpool, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 18·6 to 24·3 per 1000, declined to 20·4 during the week ending Jan. 15th, and was slightly below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·7 in Leith and 15·8 in Paisley to 23·8 in Perth and 31·5 in Greenock. The 615 deaths in these towns included 19 which were referred to diarrhœa, 15 to measles, 11 to whooping-cough, 7 to scarlet fever, 3 to "fever," and 2 to diphtheria. In all, 57 deaths resulted from these principal zymotic diseases, against 73 and 76 in the two preceding weeks. These 57 deaths were equal to an annual rate of 1·9 per 1000, which was 0·5 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 15 and 14 in the two preceding weeks, rose again to 15 last week, of which 14 occurred in Glasgow. The 11 deaths referred to whooping-cough showed a further decline from the numbers recorded in recent weeks, and included 5 in Glasgow, 2 in Edinburgh, and 2 in Greenock. The fatal cases of scarlet fever, which had been 8 and 14 in the two preceding weeks, declined to 7 last week, of which 4 occurred in Glasgow, and 2 in Edinburgh. The deaths from diphtheria, which had been 3 and 9 in the two preceding weeks, fell to 2 last week, of which 1 was registered in Dundee and 1 in Paisley. The deaths referred to diseases of the respiratory organs in these towns, which had been 186 and 177 in the two preceding weeks, further declined to 158 last week, and were slightly below the number in the corresponding period of last year. The causes of 32, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 33·0 and 31·0 per 1000 in the two preceding weeks, rose again to 31·8 during the week ending Jan. 15th. During the thirteen weeks of last quarter the rate of mortality in the city averaged 24·6 per 1000, the rate during the same period being 19·4 both in London and in Edinburgh. The 213 deaths registered in Dublin during the week under notice showed an increase of 5 upon the number in the previous week, and included 12 which were referred to the principal zymotic diseases, against 13 and 18 in the two preceding weeks; of these, 6 resulted from "fever," 2 from diphtheria, 2 from whooping-cough, 1 from measles, 1 from scarlet fever, and 1 from diarrhœa. These 12 deaths were equal to an annual rate of 1·8 per 1000, the zymotic death-rate during the same period being 3·3 in London and 1·1 in Edinburgh. The 4 deaths referred to diphtheria exceeded the number recorded in any week since September last. The fatal cases of measles, which had been 1 and 5 in the two preceding weeks, declined to 3 last week. The deaths referred to different forms of "fever," which had been 6 in each of the two preceding weeks, declined to 2 last week. The 2 fatal cases of whooping-cough showed a decline of 2 from the number recorded in the preceding week. The 213 deaths in Dublin last week included 33 of infants under one year of age and 213 of persons aged upwards of sixty years. Five inquest cases and 3 deaths from violence were registered; and 69, or nearly a third, of the deaths occurred in public institutions. The causes of 22, or more than 10 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING DECEMBER, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during December, 1897, in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious diseases in the metropolis last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 9·8 per 1000 of the population, estimated at 4,463,169 persons. In the three preceding months the rates had been 13·3, 16·0, and 12·7 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Hammersmith, St. George Hanover-square, Westminster, Marylebone, Hampstead, Stoke Newington, and St. Martin-in-the-Fields; while they showed the largest excess in Hackney, Bethnal Green, Poplar, Newington, Battersea, Woolwich, Lee, and Plumstead. One case of small-pox was notified in London during December, against 1 and 3 in the two preceding months; this case belonged to St. George Southwark sanitary area. No small-pox case was admitted into any of the Metropolitan Asylum Hospitals during December, and no patients remained under treatment at the end of the year. The prevalence of scarlet fever in London showed a further marked decline from that recorded in the two preceding months; this disease was proportionally most prevalent in Fulham, Limehouse, Mile End Old Town, Poplar, Newington, St. Olave Southwark, Battersea, Woolwich, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 3507 scarlet fever patients at the end of December, against 3585, 3571, and 3731 at the end of the three preceding months; the weekly admissions averaged 272, against 350, 367, and 383 in the three preceding months. The prevalence of diphtheria in London also showed a further decline from that recorded in recent months; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, St. Pancras, Hackney, City of London, Poplar, Battersea, Lewisham, and Lee. There were 1066 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of December, against 1033, 1029, and 1042 at the end of the three preceding months; the weekly admissions averaged 151, against 155 in each of the two preceding months. The prevalence of enteric fever in London during the month under notice showed a further marked decline from that recorded in recent months; this disease was proportionally most prevalent in Islington, Stoke Newington, Hackney, St. Luke, Poplar, and Woolwich sanitary areas. The Metropolitan Asylum Hospitals contained 116 enteric fever patients at the end of December, against 173, 175, and 155 at the end of the three preceding months; the weekly admissions averaged 17, against 28, 26, and 23 in the three preceding months. Erysipelas showed the highest proportional prevalence in St. Giles, Clerkenwell, Bethnal Green, Rotherhithe, and Lee sanitary areas. The 25 cases of puerperal fever notified in London during December included 4 in Newington, 3 in Camberwell, 3 in Mile End Old Town, 2 in Islington, and 2 in Hackney sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas of the metropolis, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, January 1st, the deaths of 9131 persons belonging to London were registered, equal to an annual rate of 21·3 per 1000, against 15·6, 16·1, and 19·0 in the three preceding months. The lowest death-rates during December in the various sanitary areas were

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS OF LONDON—DECEMBER, 1897.

(Specially compiled for THE LANCET.)

Sanitary Areas.	Estimated population in the middle of 1897.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.												
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
LONDON	4,463,169	1	1973	1360	—	288	4	25	564	—	4215	9·8	—	641	78	282	262	—	70	—	55	1388	3·2	9131	21·3	162
West Districts.																									
Paddington	126,161	—	55	34	—	5	—	1	9	—	104	8·6	—	1	2	8	2	—	1	—	—	14	1·2	198	16·4	143
Kensington	171,427	—	56	28	—	10	—	—	22	—	116	7·1	—	14	6	12	3	—	2	—	5	42	2·6	320	19·5	217
Hammersmith	105,959	—	40	12	—	4	1	—	9	—	66	6·5	—	3	2	2	1	—	2	—	2	12	1·2	207	20·4	193
Fulham	120,040	—	69	51	—	4	—	1	18	—	143	12·4	—	41	5	13	4	—	3	—	3	69	6·0	271	23·5	179
Chelsea	96,692	—	30	26	—	3	—	1	6	—	66	7·1	—	11	1	8	3	—	1	—	3	27	2·9	203	21·9	165
St. George Hanover-square	80,330	—	16	16	—	3	—	—	4	—	39	5·1	—	13	1	2	2	—	—	—	2	20	2·6	136	17·7	192
Westminster	53,027	—	11	12	—	3	—	1	6	—	33	6·5	—	11	1	4	3	—	2	—	1	22	4·3	116	22·8	186
St. James Westminster	22,576	—	8	2	—	2	1	—	2	—	15	6·9	—	4	—	—	—	—	—	—	1	5	2·3	37	17·1	132
North Districts.																									
Marylebone	140,808	—	25	21	—	10	—	—	24	—	80	5·9	—	3	1	5	9	—	1	—	2	21	1·6	270	20·0	159
Hampstead	77,275	—	16	13	—	1	—	—	4	—	34	4·6	—	4	—	1	6	—	—	—	—	11	1·5	125	16·9	174
St. Pancras	242,255	—	59	71	—	21	—	—	32	—	183	7·9	—	23	3	18	8	—	3	—	2	62	2·7	509	21·9	154
Islington	341,134	—	108	71	—	37	—	2	30	—	248	7·6	—	42	5	19	14	—	8	—	4	92	2·8	681	20·8	161
Stoke Newington	34,136	—	3	7	—	4	—	—	2	—	16	4·9	—	2	—	4	2	—	1	—	—	9	2·7	68	20·8	169
Hackney	216,698	—	117	102	—	23	—	2	22	—	266	12·8	—	34	3	25	39	—	3	—	3	107	5·1	476	22·9	173
Central Districts.																									
St. Giles	37,840	—	10	3	—	1	—	—	14	—	28	7·7	—	2	1	—	1	—	—	—	1	5	1·4	63	17·4	115
St. Martin-in-the-Fields	12,711	—	3	1	—	—	—	—	—	—	4	3·3	—	—	—	—	—	—	—	—	—	—	—	11	9·0	53
Strand	23,552	—	10	5	—	2	—	—	—	—	17	7·5	—	6	—	—	—	—	1	—	—	7	3·1	63	27·9	151
Holborn	30,493	—	6	12	—	2	—	—	3	—	23	7·9	—	3	—	—	1	—	1	—	—	5	1·7	68	23·3	196
Clerkenwell	66,162	—	27	27	—	5	—	1	13	—	73	11·5	—	8	1	5	9	—	—	—	—	23	3·6	160	25·2	162
St. Luke	41,279	—	17	10	—	5	—	—	6	—	38	9·6	—	2	4	4	6	—	1	—	—	17	4·3	123	31·1	152
City of London	30,228	—	7	17	—	2	—	—	2	—	28	9·7	—	—	1	3	—	—	1	—	—	5	1·7	65	22·4	120
East Districts.																									
Shoreditch	121,883	—	44	32	—	7	—	—	15	—	98	8·4	—	47	1	7	17	—	3	—	1	76	6·5	370	31·7	227
Bethnal Green	129,098	—	67	43	—	6	—	1	35	—	157	12·7	—	25	3	7	18	—	1	—	2	56	4·5	342	27·6	210
Whitechapel	79,724	—	45	18	—	6	—	1	7	—	77	10·1	—	6	1	1	5	—	1	—	1	14	1·8	156	20·4	146
St. George-in-the-East	47,917	—	21	9	—	3	—	—	11	—	44	9·8	—	12	1	2	5	—	3	—	—	23	5·0	137	29·8	179
Limehouse	58,508	—	34	14	—	3	—	—	9	—	60	10·7	—	2	—	1	7	—	—	—	—	10	1·8	116	20·7	188
Mile End Old Town	111,883	—	78	29	—	6	—	3	19	—	135	12·6	—	32	2	4	14	—	5	—	2	59	5·5	252	23·5	173
Poplar	169,811	—	115	83	—	20	—	1	21	—	240	14·7	—	31	3	17	21	—	8	—	3	83	5·1	372	22·8	168
South Districts.																									
St. Saviour Southwark	24,919	—	8	12	—	—	—	—	—	—	20	8·4	—	17	1	—	—	—	—	—	—	18	7·5	89	37·2	200
St. George Southwark	60,388	1	29	17	—	1	—	—	11	—	59	10·2	—	30	2	4	1	—	—	—	1	38	6·6	183	31·6	202
Newington	122,191	—	73	46	—	8	—	4	19	—	150	12·8	—	41	3	10	—	—	—	—	—	54	4·6	295	25·2	156
St. Olave Southwark	11,480	—	7	2	—	—	—	—	1	—	10	9·1	—	5	1	—	2	—	—	—	1	9	8·2	35	31·8	167
Bermondsey	85,629	—	35	20	—	6	—	1	12	—	74	9·0	—	24	5	4	5	—	4	—	1	43	5·2	207	25·2	189
Rotherhithe	40,643	—	21	2	—	2	—	—	10	—	35	9·0	—	—	1	—	1	—	—	—	1	3	0·8	64	16·4	105
Lambeth	300,048	—	150	63	—	26	—	—	40	—	279	9·7	—	50	3	21	12	—	3	—	4	93	3·2	593	20·6	120
Battersea	168,877	—	156	81	—	4	—	—	16	—	257	15·9	—	33	2	12	9	—	—	—	1	57	3·5	314	19·4	187
Wandsworth	195,612	—	105	82	—	7	2	—	20	—	216	11·5	—	5	3	12	5	—	1	—	3	29	1·5	269	14·3	108
Camberwell	257,575	—	102	107	—	16	—	3	24	—	252	10·2	—	35	5	27	9	—	6	—	1	83	3·4	518	21·0	155
Greenwich	178,367	—	60	61	—	10	—	1	29	—	161	9·4	—	6	2	6	12	—	2	—	3	31	1·8	304	17·8	110
Lewisham (excluding Penge)	86,152	—	18	40	—	4	—	—	11	—	73	8·8	—	5	—	7	1	—	—	—	—	13	1·6	120	14·5	111
Woolwich	41,409	—	27	17	—	4	—	1	7	—	56	14·1	—	2	1	3	1	—	2	—	—	9	2·3	76	19·1	220
Lee	39,215	—	22	17	—	—	—	—	12	—	51	13·6	—	—	—	2	—	—	—	—	1	3	0·8	52	13·8	99
Plumstead	61,067	—	63	19	—	2	—	—	6	—	90	15·4	—	2	1	2	4	—	—	—	—	9	1·5	97	16·6	125
Port of London	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 45 cases of membranous croup.

† Including deaths from membranous croup.

9·0 in St. Martin-in-the-Fields, 13·8 in Lee, 14·3 in Wandsworth, 14·5 in Lewisham (excluding Penge), 16·4 in Paddington and in Rotherhithe, 16·6 in Plumstead, and 16·9 in Hampstead; the highest rates were 27·6 in Bethnal Green, 27·9 in Strand, 29·8 in St. George-in-the-East, 31·1 in St. Luke, 31·6 in St. George Southwark, 31·7 in Shoreditch, 31·6 in St. Olave Southwark, and 37·2 in St. Saviour Southwark. During the five weeks of December 1383 deaths were referred to the principal zymotic diseases in London; of these, 641 resulted from measles, 282 from diphtheria, 262 from whooping-cough, 78 from scarlet fever, 70 from enteric fever, and 55 from diarrhœa. These 1388 deaths were equal to an annual rate of 3·2 per 1000; no death from any of these zymotic diseases was recorded last month in St. Martin-in-the-Fields; in the other sanitary areas they caused the lowest death-rates in Paddington, Hammersmith, St. Giles, Rotherhithe, and Lee; and the highest rates in Fulham, Shoreditch, Mile End Old Town, St. Saviour Southwark, St. George Southwark, and St. Olave Southwark. The 641 fatal cases of measles were just double the corrected average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in Fulham, Strand, Shoreditch, Mile End Old Town, St. Saviour Southwark, St. George Southwark, Newington and St. Olave Southwark sanitary areas. The 78 deaths from scarlet fever were 43 below the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Kensington, Fulham, St. Luke, and Bermondsey. The 282 fatal cases of diphtheria exceeded by 41 the corrected average number; the mortality from this disease was highest in Fulham, Chelsea, Stoke Newington, Hackney, Poplar, Newington, Camberwell, Lewisham, and Woolwich sanitary areas. The 262 deaths referred to whooping-cough were 25 above the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Hackney, Clerkenwell, St. Luke, Shoreditch, Bethnal Green, and Poplar. The 70 fatal cases of enteric fever were 17 below the corrected average number; this disease was proportionally most fatal in St. George-in-the-East, Mile End Old Town, Poplar, and Bermondsey sanitary areas. The 55 deaths from diarrhœa were 13 below the corrected average number. In conclusion, it may be stated that the mortality in London from these principal zymotic diseases during December was nearly 30 per cent. above the average, owing principally to the excessive fatality of measles.

Infant mortality in London, measured by the proportion of deaths of children under one year of age to registered births, was last month equal to 162 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. Giles, St. Martin-in-the-Fields, Rotherhithe, Wandsworth, Greenwich, Lewisham, and Lee; and the highest rates in Kensington, Holborn, Shoreditch, Bethnal Green, St. Saviour Southwark, St. George Southwark, and Woolwich.

THE SERVICES.

NAVAL MEDICAL SERVICE.

THE following appointments are announced:—Surgeons: MacMahon to the *Excellent*; Nix to the *Victory*, additional for disposal; and Sheward to the *Excellent*.

ARMY MEDICAL STAFF.

Surgeon-Captain Winter takes over medical charge of troops and their families, Archcliffe Fort and Prison, Dover. Surgeon-Major Robinson has proceeded from Leeds to York. Brigade-Surgeon-Lieutenant-Colonel MacKinnon, D.S.O., is transferred from the Regimental District at Reading to the Recruiting Staff in London.

The following medical officers have been ordered to proceed to Egypt:—Surgeon-Colonel Barrow, Surgeon-Major Barnes, Surgeon-Major Robinson, Surgeon-Major Stuart, Surgeon-Captain Marder, Surgeon-Captain Borradaile, Surgeon-Lieutenant Bliss, Surgeon-Lieutenant Cummins, Surgeon-Lieutenant Stallard, and Surgeon-Lieutenant Hopkins.

MILITIA MEDICAL STAFF CORPS.

Arthur Ernest Madge, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Norfolk (Eastern Division, Royal Artillery): Mordaunt George Dundas, to be Surgeon-Lieutenant. 2nd West Riding of Yorkshire (Western Division, Royal Artillery): Lieutenant John Crossley Wright, M.B., resigns his commission, and is appointed Surgeon-Lieutenant; Surgeon-Lieutenant-Colonel H. Meade resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement. *Royal Engineers:* 2nd Gloucestershire (the Bristol): John Morgan Mortimer Thomas, late Surgeon-Captain, to be Lieutenant. *Rifle:* 1st Volunteer Battalion the Manchester Regiment: Robert Stuart Rodger, M.B., to be Surgeon-Lieutenant. 3rd (the Buchan) Volunteer Battalion the Gordon Highlanders: Surgeon-Captain J. Stephen, M.D., to be Surgeon-Major; Surgeon-Lieutenant J. Middleton, M.B., to be Surgeon-Captain.

SANITARY CONDITIONS OF THE UNITED STATES ARMY.

The report of the Surgeon-General of the United States Army for the fiscal year ending June 30th, 1897, has just been issued and, so far as the health and sanitary condition of the troops is concerned, is eminently satisfactory. Statistics showed that for the year 1895 the health of the soldiers was better than in any former period in the history of the army and the rates of 1895 and 1896 are practically identical. The death-rate from all causes constituted 5·44 per 1000 of the strength—not much higher than that of the previous year and much lower than the average annual rate of 7·51 of the previous ten years. The corresponding rates from disease were 3·83, 3·55, and 5·10. The total number of deaths from disease was 104. Typhoid fever caused 17 of these deaths, disease of the heart 13, pneumonia 9, disease of the kidneys 8, alcoholism 7, tuberculosis 6. It will be observed that tuberculosis was the cause of fewer deaths than any other important disease. The Surgeon-General calls especial attention to the fact that great improvement has taken place in the sanitary condition of the coloured troops. Forty-seven cases of diphtheria were reported, but there was some doubt as to the accuracy of the diagnosis in many of the cases. Favourable results were obtained by the use of antitoxin and no deaths were reported from diphtheria. The admission-rate for all venereal diseases during the year was 78·08 per 1000 of strength and the non-efficiency 5·26. The admissions for rheumatic affections gave a rate for the year of 59·68 per 1000 of strength; the rate for the coloured troops being 71·26 and for the white troops 58·61. The admission-rate for malarial infections for the year was 83·08 and the rate of non-efficiency 1·65. The average weight and height measurements for the whole number of last year's recruits give the foreign-born the advantage over the native white in weight and chest measurement, although the latter is taller by half an inch. The mean height and weight of the recruits between the ages of twenty and twenty-four years were as follows: The mean height of the coloured recruit was 5 ft. 7·25 in.; weight, 10 st. 4·55 lb.; chest measurements, 36·31 in. at inspiration and 33·76 in. at expiration. The native white recruit was 5 ft. 7·76 in. in height; weight, 10 st. 3·47 lb.; chest measurements, 36·82 in. at inspiration and 33·93 in. at expiration. The foreign-born recruit was 5 ft. 7·11 in. in height; weight, 10 st. 3·98 lb.; chest measurements, 37·27 in. at inspiration and 34·32 in. at expiration. Of every 1000 accepted recruits 750·87 were natives of the United States, 674·26 white and 76·61 coloured; Germany furnished 74·53 and Ireland 74·30; England contributed 25·20, Canada 15·37, Sweden 11·67, Denmark 8·09, and Austria 7·16.

THE INDIAN FRONTIER EXPEDITION.

We have previously expressed our belief that, in spite of the fact that the Afridis had not yet tendered their submission, the neck of the extensive revolt on the part of the border tribes had nevertheless been broken. The news has of late been more hopeful and encouraging. Most of the tribes are surrendering or have already done so. General Jeffreys' force now occupies the heights commanding the Ambeyla Pass and the pass itself, and the tribes of that district have tendered their full submission. This is very satisfactory considering the seriously grave experience we had of their fighting qualities in that pass in 1865. There is still a good deal of "sniping" and irregular firing going on near Ali Musjid, where the enemy can be seen in force in the vicinity of the fort, but the attacks on the troops in the pass and valley of the Khyber are very feeble compared with what they have been elsewhere. The health of the troops continues to be good on the whole. The prospect is, as we have said, brightening,

and we may hope that there will be an end before long to what has proved to have been one of the hardest and most arduous campaigns on record. The sufferings of the troops in some of the columns taking part in the late campaign were greatly increased owing to the want of water, and the breakdown of the animal and native transport, owing to the precipitous, slippery, and difficult nature of the ground, often formed a great obstacle which might have led to a big military disaster when the rear of the force was attacked, as it so often was. The latest telegraphic news from the Indian frontier is to the effect that 500 Maliks, representing all sections of the Afridis except the Zakha Khels, have arrived at Jamrud and are at once to have an interview with Colonel Warburton. The frontier trouble now looks as if it were in a fair way of settlement. The Zakha Khels, a powerful section no doubt of the Afridis, are now the only tribe that have not submitted. There should not apparently be any insuperable difficulty in securing the submission of this tribe by making them understand that the British Raj has not any idea of annexing their country or interfering with their independence.

THE PROPOSED INCREASE OF THE ARMY.

It is proposed to obtain Parliamentary sanction for the increase of the army by 15 000 men. We may therefore confidently expect that the War Office authorities will not only declare what changes they intend to introduce in the way of army re-organisation and reform, but also what changes are to be made in the army medical service. It is clear that a corresponding increase of the medical staff must accompany that in the strength of the army. It is notorious that the medical staff is at present much below its establishment and something must be done to restore the popularity of that service. Lord Lansdowne will shortly have to announce his intentions in this respect.

THE SOUDAN EXPEDITION.

There has been great activity manifested of late in sending reinforcements from Cairo to the Egyptian army in the Soudan and in the transport of troops from this country to Egypt in view of meeting any sudden or unexpected contingency. These changes have been apparently carried out rather with the view of being prepared for any aggressive movement on the part of the Kalifa's forces than for the purpose of any immediate advance on Khartoum. It was certainly time that the Egyptian forces in the Soudan were firmly strengthened by British troops. A very extended line of country is held by the Egyptians and some of the posts are weakly defended against any sudden or overwhelming attack of the Dervishes. The black battalions of the Egyptian force are very courageous troops and can be relied upon to give a good account of themselves. A number of military surgeons have left this country for Egypt and it seems likely that later more will be required.

ARMY MEDICAL SCHOOL, NETLEY.

The present session of the Army Medical School, Netley, will be brought to a close on Monday, Jan. 31st, when the prizes will be distributed by General Sir Henry Wylie Norman, G.C.B., G.C.M.G., C.I E.

DEATHS IN THE SERVICES.

Brigade-Surgeon James Greig Leask, Army Medical Department (retired), aged sixty-five years. He joined the service in 1855, served in the Zulu Campaign, and retired in 1881.

MANCHESTER MEDICAL SOCIETY.—The annual meeting of the Manchester Medical Society was held on Jan. 12th in the society's reading-room at Owens College, Dr. Graham Steell, the retiring President, being in the chair. It was stated that there are now 375 members, an increase of 100 since the subscription for town members was reduced from £2 2s. to £1 1s. The following officers were elected for the year 1898:—President: Mr. G. A. Wright. Vice-Presidents: Mr. Collier, Dr. Godson, Dr. Harris, and Dr. Reynolds. Treasurer: Dr. Glascott. Secretary: Mr. Coates. Committee: Dr. P. Ashworth, Dr. A. Brown, Dr. J. G. Clegg, Dr. Edge, Dr. T. A. Helme, Dr. Milligan, Mr. Milner, Mr. J. E. Platt, Dr. Torrop, Dr. Wild, Dr. A. T. Wilkinson, and Mr. A. Wilson. Library Committee: Dr. Kelynack, Mr. J. W. Smith, and Dr. R. T. Williamson. Auditors: Dr. Goodfellow and Dr. Ledward.

Correspondence.

"Audi alteram partem."

THE SOCIETY OF APOTHECARIES AND MR. VICTOR HORSLEY.

To the Editors of THE LANCET.

SIRS,—In an address delivered by Mr. Victor Horsley and published in THE LANCET of Jan. 1st, two questions are raised affecting the Society of Apothecaries. The first question is whether the erasure of the name of a Licentiate from the list of the Society is equivalent to the cancellation and deletion of the licence or diploma granted to him. I am unable to say that it is so, and I gather that my opinion is shared by the legal assessor of the Medical Council. If it is equivalent it must be inferentially; I mean that this result is certainly not obtained by statutory enactment. The power of the Society to erase is conferred by the Apothecaries Act Amendment Act, 1874.

In a further speech delivered by Mr. Victor Horsley and reported in last week's *British Medical Journal*, p. 173, Mr. Victor Horsley, if correctly reported, makes the following statement which is not intelligible:—"They [the Society] obtained a Bill not very long ago called the Apothecaries Amendment Act, giving them power to strike persons off their list of Licentiates and *if that Act had been passed* they would have been placed on the same footing as any other body." But the Act *was passed*, and if it had not been the Society of Apothecaries would not possess the powers which they do.

The Fourth Section of the Act is as follows:—"It shall be lawful for the Master Wardens and assistants for the time being of the said Society of Apothecaries to strike off from the list of Licentiates of the said Society the name of any person who shall be convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence, or who shall after due inquiry be judged by the General Council to have been guilty of infamous conduct in any professional respect and the said Society shall forthwith signify to the General Council the name of the Licentiate so struck off."

The duties of the Society of Apothecaries under this section are, as will be seen, ministerial and not judicial, and under it the society, in cases of infamous conduct in a professional respect, can only erase from their own list a name already struck off the Medical Register. So far, then, as language goes there is no power given to the Society by this section to destroy the diploma of the person whose name has been erased from the list of Licentiates or to compel him to give it up for cancellation. No doubt this creates a difficulty, for (1) the person so erased retains his title though unable to recover his fees by legal process, and consequently (2) if capable of restoration he must be restored on the footing that his diploma has never been destroyed, and (3) he cannot be successfully proceeded against for unqualified practice.

I have said *if capable of restoration*, though having regard to the silence of the Medical Act, 1858, on the point I have always myself doubted the power of the Medical Council to restore. If, however, the Council can and do restore a name what is the Society of Apothecaries to do? They erase, as I have pointed out, to make their own list correspond with the Medical Register; if they refuse to restore (and they would absolutely refuse to do so unless the Council had previously restored the name to the Register) there would be the same confusion as if they were to refuse to erase. As a matter of fact, two names of Licentiates qualified prior to 1886 erased from and restored to the Medical Register have been restored to the Society's list of Licentiates on the footing of their old diplomas. Fresh legislation, in my opinion, can only meet the difficulty by assimilating the practice of the medical to that of the legal profession and providing for suspension of practice in cases with extenuating circumstances and absolute cancellation of the diploma in those where there are none.

In dealing with the second question I do not know to what particular statement or opinion ever made or given by me Mr. Victor Horsley is referring. I think he must be alluding to a statement which from time to time appears in the newspapers of the persons who have received

the Society's diploma. This statement is not inserted by me, and I am not "the secretary of the Society." I have, in fact, nothing to do with the examining functions of the Society except as their legal adviser. I venture, however, to think that the point raised by Mr. Victor Horsley is of a somewhat academic character. The Society have certainly never meant or intended to assert that their diploma *without registration* enables the holder to practise medicine, surgery, and midwifery, but they certainly do assert that it does so *when registered*. Registration is such a necessary complement of obtaining a diploma or diplomas that the distinction drawn by Mr. Victor Horsley would, I think, be difficult of recognition by most persons, who would assume that the statement under discussion conveyed by implication the meaning which I have attached to it. If it is this statement to which Mr. Victor Horsley is referring, I may add that I have for entirely different reasons long felt an objection to it, and if the Society take my advice they will discontinue its insertion in its present form.

I have occupied so much of your space that I will not deal with the relations of the Society of Apothecaries and the Medical Defence Union, to which Mr. Victor Horsley refers (page 173 of this week's *British Medical Journal*), but were I to do so it would be found that they reflect no discredit on the Society. I should not have troubled you at all had I not been referred to by name, and I am still somewhat at a loss to know on what grounds my name has been mentioned. Any letters I have addressed to the Medical Council or otherwise have been official ones on behalf of the Society and not written by me as an individual.

In conclusion, sufficient allowance is not made for the exceptional position of the Society. Whatever they have done has been done without assistance and often in spite of opposition. They do not and cannot possess the power and the influence of the Royal Colleges. Nothwithstanding, their record past and present is excellent, and those who know most about their work will not disparage or depreciate what they have done for the medical profession.

I am, Sirs, your obedient servant,

JAMES RICHARD UPTON.

Society of Apothecaries, Jan. 15th, 1898.

INTERNATIONAL PHOTOGRAPHIC EXHIBITION, CRYSTAL PALACE, 1898.

To the Editors of THE LANCET.

SIRS,—The Royal Photographic Society is organising an exhibition which will be open at the Crystal Palace from April 27th to May 14th. In addition to the exhibits of photographs and apparatus of which such exhibitions usually consist a considerable area has been devoted to collections illustrating as fully as possible the many scientific applications of photography; amongst these x rays photographs play a large part. The committee are very anxious that the exhibition shall be thoroughly representative and shall illustrate the very large part which photography plays both as a recording agent and otherwise in so many scientific and manufacturing processes, and would ask any of your readers who may be able to help by the loan of examples of the application of photography to medicine or surgery if they would kindly communicate with me at 12, Hanover-square. I should be happy to forward anyone interested a copy of the preliminary prospectus and need hardly say that the committee are prepared to pay the carriage upon all exhibits which are invited and that there will be no charge whatever in connexion with these loan sections.

I enclose a copy of the preliminary prospectus and am, Sirs, yours faithfully,

R. CHILD BAYLEY,
Assistant Secretary.

12, Hanover-square, London, W., Jan. 15th, 1898.

"TRANSMISSION OF SYPHILIS TO THE THIRD GENERATION."

To the Editors of THE LANCET.

SIRS,—On reading the annotation with the above title in THE LANCET of Jan. 15th I was reminded of a case that occurred some years ago in my London practice. The father of the child in question was a young man who assured me in the most solemn manner that he had never had connexion before he married, and I had no reason to doubt him, and the mother, a primipara, was the daughter of respectable parents, her father having been a master mariner; her mother was still alive and had always been in the enjoyment of good health. The infant, however, rapidly developed symptoms of congenital syphilis which gave way to the usual mercurial treatment, but as the child got well the mother became affected, and when examining her throat I was struck by the peculiar appearance of her teeth, which were small and notched. In addition to the throat symptoms the woman had a number of brown marks on the skin, chiefly on the face, which disappeared when I treated the case as one of secondary syphilis and after a time she was restored to her usual health. The second child was not affected nor the third, though after the birth of each of them there was a recurrence of the throat symptoms in their mother. I thought, and am of the same opinion still, that this was clearly a case of transmission to the third generation of a disease that subsequently made its appearance in the grandmother, who appeared to have been infected by her first husband.

I am, Sirs, yours faithfully,

Belvedere, Kent, Jan. 15th, 1898. W. T. GREENE.

THE PREVENTION OF HOSPITAL ABUSE.

To the Editors of THE LANCET.

SIRS,—Would any of your readers oblige me with information as to what institutions employ a paid inspector with a view to preventing out-patient abuse and also what institutions enjoy the services of honorary almoners for the same purpose? I remain, Sirs, your obedient servant,

Grosvenor-street, W., Jan. 17th, 1898. C. B. KEETLEY.

MODIFIED COW'S MILK.

To the Editors of THE LANCET.

SIRS,—In your review of a recent paper of mine on the Value of Modified Cow's Milk in Infant Feeding, contained in THE LANCET of Dec. 18th, 1897, I feel I have been misrepresented in one or two points. The reviewer states that in his opinion "some of the details given in this paper are ..... too strongly suggestive of an effort to improve upon nature or even to do away with the 'homely nurse' altogether." Again, he speaks of my "wholesale distrust of the provision made by nature for the needs of infancy." One of the first sentences of the paper in question reads as follows: "Maternal milk is the best food for infants and there is but little doubt that no food will ever be found which will fully supply its deficiency." In giving percentages I have only dealt in the most general way with averages. As a general rule we find that low percentages give the best results in this country. This system of feeding has proved the most successful that we have yet tried in America. Now that the Walker-Gordon Laboratory Company have opened a branch in the Trafalgar-building in London we hope soon to have an opportunity to compare the results obtained "on the other side of the water" with our own. Methods of infant feeding that are in use in England have never proved successful in this country, but now we hope to have our method prove successful over there.

I am, Sirs, yours faithfully,

Dorchester-street, Montreal, Jan. 4th, 1898. DAVID J. EVANS.

THE PREVENTION OF LARGE MAMMARY ABSCESSES BY EXPRESSION OF MILK.

To the Editors of THE LANCET.

SIRS,—In corroboration of the remarks made in THE LANCET by Mr. Walter G. Spencer and Dr. Warde I should like to say how thoroughly I agree with what they say. During my many years of practice I have never had a patient with a broken breast, but I have had many threatenings of abscess. One case I remember well. The patient had a severe rigor; the temperature was 103·4° F.; a hard and inflamed lump occupying half the right breast and intensely tender. The nurse, who had had twenty-five years' experience of monthly nursing, said she had never nursed a

patient with a broken breast and she believed it was entirely the nurse's fault when it occurred, and under my directions she worked at this breast four or five times a day, rubbing it gently with hot oil towards the nipple for twenty minutes at a time and keeping on hot fomentations between the rubbings. The result was that the contents of the breast escaped through the nipple and the whole gradually subsided. These hard masses generally occur in the pendant portion of the breast, and I always, and particularly during the rubbing, enjoin the patient to lie on the opposite side so as to give the hardened portion of the breast more facility for relieving itself.

I am, Sirs, yours faithfully,

WILLIAM FAIRBANK,

Surgeon to the Windsor Infirmary, Surgeon to Her Majesty's Household at Windsor, and Surgeon in Ordinary to Their Royal Highnesses Prince and Princess Christian of Schleswig-Holstein.

SOUTH-WEST LONDON MEDICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—In the *British Medical Journal* of Jan. 15th is an account of the meeting of the South-West London Medical Society at which Mr. Carter read a paper on Legislation as a Remedy for Medical Grievances. As chairman of the meeting I am reported to have assured Mr. Carter that there was nothing discourteous in the remarks which Mr. Horsley made on Dec. 8th. It has been represented to me that my published remarks do not do justice to Mr. Horsley. I should be much obliged therefore, as I believe I stated in the most emphatic manner that Mr. Horsley had not made a personal attack on Mr. Carter, if you will kindly emphasise this point in your report. If you should publish Mr. Carter's address in full, as I hope you will, I think it only right that this should be made clear.

I am, Sirs, yours faithfully,

T. A. I. HOWELL.

West-hill, Wandsworth, S.W., Jan. 18th, 1898.

DELAY IN THE PAYMENT OF MEDICAL FEES AT CORONERS' INQUESTS.

To the Editors of THE LANCET.

SIRS,—As I find the coroner of my district invariably keeps me waiting for the payment of fees for evidence and post-mortem examinations, excusing himself from responsibility on the grounds that *he* has to wait before he gets them from the authorities, may I ask if (1) I could refuse to give evidence before payment; or (2) refuse subpœnâ; or (3) to whom should I complain in case of his persistent refusal? He has, I presume, to pay other witnesses at the time and why should I have to wait?

I am, Sirs, yours faithfully,

Jan. 17th, 1898. G. P.

*** (1) We do not think "G. P." should refuse to give evidence until paid. He can do this in a court of law, where the funds are at the disposal of the presiding officer, but a coroner's inquest is on a different footing. (2) It would be wrong to "refuse subpœnâ" for a case to come because of non-payment in the past. (3) The Lord Chancellor.—ED. L.

"THE UNQUALIFIED ASSISTANT AND THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—In reference to the important resolution of the General Medical Council on the above subject I should like to ask why there should be any outcry against the removal of the unqualified assistant. No other profession allows itself to be represented by shams; who ever heard of unqualified people representing the Church, the army, or the law? Why should the medical profession be the only one to encourage fraud and deception?

We all know why the majority of these men are not qualified; we all know well what they did with their time at university or college—they are failures, and as a rule deservedly so; as they have sown so should they reap.

I believe also that unqualified assistance is one of the chief causes of the overcrowding of the profession we hear so much about. Here in the West Riding of Yorkshire within two miles of my house are five medical men; each of these employs an unqualified assistant; each of these assistants does the work of a medical man, they are called "doctor" by the public, and are believed by the majority to be such; they act as "locum" during the holidays of their principals, and, in fact, take the places which qualified men ought to have; their principals employ them because they have more work to do than they can get through unaided. In conclusion, I think that all qualified men should rejoice that the time has at last arrived for imposture to be removed from *within* the ranks of the profession and should applaud and encourage the Council in their resolution.

I am, Sirs, yours faithfully,

Jan. 17th, 1898. ANOTHER M.B.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Imbeciles and Epileptics.

IN August last Dr. J. M. Rhodes, chairman of the Chorlton Union Guardians, and Alderman A. McDougall were appointed by the Chorlton and Manchester Joint Asylum Committee to visit various institutions in Germany, France, and Belgium for the care and treatment of imbeciles and epileptics to collect information with regard to their treatment and management. The importance of this question to Manchester is evident when we remember that the area of the Chorlton Union and of the old Manchester township is 13,345 acres, that the population of the area is 444,965, and that in the workhouses of Chorlton and Manchester there are close on 600 of these unfortunate people. In addition to these a large number of cases are now maintained in the county asylums by the two boards which would be provided for in any new building the joint committee should decide to erect. In the workhouses no proper and thorough classification of these patients is possible. Moreover, there are cases unsuitable for either the county asylum or the workhouse but for which the "various advantages of a special institution" would be desirable. Having in their report described the salient features and administrative methods of a number of the institutions visited the following recommendations are made by Dr. Rhodes and Mr. McDougall: (1) That of the epileptics and imbeciles, the mental and bodily sick—say 20 per cent.—should be provided for in pavilions similar to the Wilhelmina Augusta Pavilions at Alt-Scherbitz; (2) that those not physically incapable—say 80 per cent.—should be provided for on the colony plan, and that not more than thirty persons should be placed in each home; and (3) that provision should be made for those able to pay a proportionate sum towards their maintenance. In 1889 the International Congress on Public Assistance held at Paris, passed a resolution in favour of the colony system, and Le Congrès International de Médecine Mentale, passed a similar resolution. The reasons given for the recommendation of this system are (1) that under it the health, physical and mental, is improved, and (2) that the cost is less to the ratepayers. At Alt-Scherbitz there are 960 persons in the asylum and the authorities have wisely bought enough land, 760 acres. The whole cost per bed comes to £142, "a very moderate sum compared with the cost of the huge block asylums with which we are so well acquainted." The importance of buying sufficient land is strongly urged in the report. Small wards of ten or twelve beds as at Alt-Scherbitz and Uchtspringe are recommended. For those physically well though mentally weak and harmless the cottage home system is advised. At Alt-Scherbitz the cottages for twenty or thirty cases each have three day-rooms on the ground floor besides a small room for those who are actually suffering from an epileptic attack. This is strongly recommended as—to quote again from the report—"although the colony system allows for good classification, yet the three rooms enable the patients to still further classify themselves, and we are strongly of opinion that such provision is conducive to the quiet and contentment which we found to prevail among the patients."

The writers modestly regard this as only a preliminary report and believe that if the Local Government Board would send "three such gentlemen as Mr. Jenner-Fust, Mr. Downes, and Mr. Gordon Smith to visit and report on the asylums containing epileptics in Germany the information would be invaluable to the boards of guardians and also to the county councils."

The Infirmary Site.

A report has at last been received from the Joint Committee, consisting of six members of the City Council and six members of the Infirmary Board, appointed some time ago to consider the best method of providing additional hospital accommodation without encroaching on the open space now surrounding the infirmary. It is held by many, but not by all, that by an old agreement or understanding the infirmary authorities are debarred from utilising their land round the present building for its extension and that this agreement was broken by the erection some years since of the present out-patients' department and the nurses' home. Increased accommodation for in-patients has long been needed and various schemes for its provision have been brought forward only to be rejected. The infirmary authorities have been in the position of the ox when the dog was in the manger; the land was theirs but they were not to use it. This committee was to untie or cut the knot and the proposed method of doing it is curious. No provision is made for more beds but the surrounding streets are to be widened. Piccadilly, already fairly broad, is to be several yards wider. Portland-street and George-street, quite broad enough for the traffic, are to be made still broader. The only street that even seems to require widening is Parker-street at the back of the infirmary, but, as the *City News* says, it is "simply a roadway to the warehouses on one side of the street for carts and lorries to load or unload. It is never crowded or congested." To carry out these changes the nurses' home and the commodious out-patients' department erected at considerable cost must be swept away. By this comparatively small amount but by no more the open space will be increased. The infirmary railings will be moved further back, some of the statues on Piccadilly are to be placed within them, the infirmary is to be kept in a smaller cage, and the dust and noise of the streets—already quite near enough for the comfort of the patients—will be brought nearer. The work of the charity must necessarily be so much crippled that it seems as if by this scheme the complete removal of the infirmary from its present site is deliberately to be forced on the trustees. Dr. Renaud has written a long letter to the papers pleading with much graceful ingenuity the healthiness of the present building in spite of its long corridors and old-world arrangements and showing the ease with which 180 or 200 beds can be added to the present number by putting another storey on the three already existing, but though his chivalrous advocacy of the ancient ways may be admired, his advice is not likely to be followed. The infirmary site is far the best in the city and if the work to be done there is cut down, as it must be by this scheme, the best plan will be for the whole site to be sold and for the hospital to be taken to the suburbs and a small receiving house for emergencies with an out-patient department to be built as near the present position as possible. The cost would be considerable, but not so very much beyond the £286,000 proposed to be given for the slicing and maiming of the infirmary estate now contemplated. A site is wanted for the Free Library which has outgrown its present abode, and also for the Art Gallery, now most inadequately domiciled in the Royal Institution. They might well live together under the same roof in a building worthy of themselves and of Manchester. The open space would not be encroached on and the sale of their present property would enable the infirmary trustees to build a hospital in the suburbs equipped with the best appliances that science and experience have at present devised. But before anything can be done the scheme must be approved by the trustees and the City Council and it is by no means certain that those who declined to give a smaller sum for the 1200 acres of Trafford Park with all its possibilities of good to Manchester will feel disposed to pay £286,000 for between 12,000 and 13,000 yards, the purchase of which is not likely to benefit directly any one of its inhabitants.

Backward School Children.

An interesting meeting was held a short time ago under the auspices of the Manchester Association for Child Study, the chief subject for discussion being how to deal with backward children in our public elementary schools. Dr. Ashby thought that while the others were fairly well attended to there was a danger of our forgetting those with the backward brains, who, though they could not be expected to rival their more richly-endowed brothers and sisters, might at least be educated so as to lead good and useful lives. Miss Dendy, who was for some time a member of the Manchester School Board, noted that out of some 40,000 children in the Manchester schools 525 seemed more or less handicapped by mental incapacity. She thought that for all grades of these defective ones there ought to be special classes not in every school but in various centres and spoke of the good to be done by encouraging the dull and weakly ones, for many were backward only because they were absolutely discouraged. Dr. Kerr, the medical superintendent of the Bradford School Board, spoke of the excellent results that had followed the establishment in Bradford of special classes for the dull or defective children, and drew attention to the fact that "many children were kept from school altogether because of some physical defect from which they had once suffered or which might easily be cured." He thought, too, that the children in the special classes should have the advantage of two additional years in them so that they might have a chance of "holding their own in the battle of life." There can be no doubt that kindly sympathetic treatment is becoming generally known as the best means of strengthening these feeble-minded children and that the blundering harshness of an older day is almost gone.

Jan. 18th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow Drainage Scheme.

ANOTHER step towards the realisation of this extensive undertaking will shortly be taken as in the ensuing session of Parliament the corporation will apply for powers which if granted will ensure that the whole of the sewage of the city and burghs on the south side of the river will be conveyed to the purification works at Braehead by a double system of sewers. The quantity of sewage which will then be dealt with will, it is estimated, be about twenty-four million gallons daily.

Epidemic of Measles in Glasgow.

For some weeks measles has been very prevalent in Glasgow and more especially in the west-end of the city—a repetition of the experience which occurred twelve months ago. The absence of compulsory notification renders it impossible to state the exact number of cases, but the number of cases voluntarily notified to the authorities for the fortnight ending on the 1st inst. was 324, whilst the disease was accountable for twenty-one deaths.

The Health of Dr. Archibald K. Chalmers, of Glasgow.

Dr. Archibald K. Chalmers, the junior medical officer of health, has for some time been unable to attend to his duties on account of illness. He has recently been ordered to Algiers and it is anticipated by his medical advisers that the mild dry air of that place will soon restore him to his former vigour.

The late Dr. Mather of Glasgow.

A committee has been formed to promote some permanent memorial to the late Dr. George R. Mather, who for many years practised in the city and who is perhaps best known to the profession as the author of a life of William and John Hunter. It has been determined to erect a marble bust in some public place in the east-end of the city. A number of well-known citizens have interested themselves in the movement.

Glasgow Royal Asylum.

The annual meeting of qualified contributors was held on the 13th inst., Sir James Bell, Bart., being in the chair. The most interesting feature of the report was the announcement that the whole of the pauper patients with a few special exceptions had been removed from the asylum and that the directors were now devoting the accommodation thus vacant to the reception of private patients of the least

affluent class. This has so far been accomplished without material loss to the revenue, though no less than 100 additional private patients had been admitted at the lowest possible rate of board. The visitor in lunacy, in drawing attention to the policy of the directors in this respect, speaks in high terms of the scheme as one by which deserving patients in straitened circumstances are saved from the stigma of pauperism. Of 384 patients 182 are received at a rate of £40 or under per annum. Mr. W. A. Parker, M.B., C.M. Glasg., one of the assistant medical officers, has been promoted to be senior assistant at Gartloch Asylum, and his position has been filled by the appointment of Mr. W. J. Orr, M.B., C.M. Glasg.

Glasgow University.

The following gentlemen are understood to be candidates for the vacant chair of Forensic Medicine: R. M. Buchanan, M.B. Glasg., Professor of Forensic Medicine in Anderson's College Medical School; Ebenezer Duncan, M.D. Glasg., physician to the Victoria Infirmary and President of the Glasgow Philosophical Society; Hugh Galt, M B. Glasg., D.P.H. Camb., assistant to the University chair; and John Glaister, M.D, Glasg., D.P.H. Camb., Professor of Forensic Medicine in St. Mungo's College. The patronage of the chair is in the hands of the Crown and the appointment is worth about £600 per annum. The number of students matriculated in Glasgow continues, as in other Scottish Universities, to decline. This falling off is most notable in the Arts faculty, but also to a less extent affects the medical students, who in 1896 numbered 621 and last year 565. The women students for the current session are entered at 256 and of these some 80 are in the medical faculty and are not included in the above figures. In 1889 the total of matriculated students was 2101; last year the number had fallen to 1533.

Hospital Sunday in Aberdeen.

Hospital Sunday took place on the first Sunday of this year and despite the inclemency of the weather the net result of the church collections was rather larger than last year, amounting to about £1200.

University of Aberdeen.

The Town Council of Aberdeen has voted £5000 to the University buildings extension scheme on condition that the same be completed. Aberdeen University Court has thankfully accepted the donation and remitted the condition to a committee for report. In regard to the students' union it has now been arranged that a "modest quencher" in the shape of a pint of beer shall be allowed at lunch to members.

Jan. 18th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Richmond Lunatic Asylum.

ON the 17th inst. a deputation representing the districts which contribute to the maintenance of the Richmond Lunatic Asylum waited on the Chief Secretary, Mr. Balfour, at Dublin Castle, for the purpose of urging that in the forthcoming Local Government Bill provision should be made for increasing the Treasury capitation grant for the support of the lunatic poor and from preventing the Dublin district from being compelled to support persons who became insane while inmates of the general hospital here or temporarily resident in the city though really belonging to other districts. The Chief Secretary received the Lord Mayor and members of the deputation with his usual courtesy and, as has been his custom recently, discussed the question in all its bearings. In the end, however, he explained that the grievance in Dublin was not exceptional as similar complaints had been made from the large centres in England and Scotland. He finally declined to introduce any provision to deal with the matter in the forthcoming Local Government Bill.

The Pembroke Committee for the Training of Workhouse Nurses.

The members of the above committee held their first meeting on the 14th inst., Mr. John Mulhall, of the General Prisons Board, occupying the chair. The secretary stated that excellent reports had been received from the six hospitals in England, Scotland, and Ireland as to the progress made by the probationers in training and that at least four of these probationary nurses would be available for employment in Irish union infirmaries in April. Moreover, that arrangements were in progress for the training of other nurses in the hospitals of Dublin, the curriculum to include a course of midwifery at the Rotunda, Coombe, or Hollis-street hospitals. The four nurses who will soon be available have been specially trained for duty in workhouse hospitals. It was decided to open a fund to be called the Irish Workhouse Nursing Fund and that the public be invited to subscribe to it.

Circular Saw Wound.

A patient suffering from an accident of a very shocking description was recently admitted to the Meath Hospital. A strong man, aged twenty-two years, while in charge of a large circular saw fell forward on it in such a way that it struck him between the eyes. On admission to hospital his face was found cut across from ear to ear, his eyes were both destroyed, while brain matter escaped through the wound in his skull. Notwithstanding the nature of his injuries the patient lived for nine days, a fact which was commented upon by the city coroner on the occasion of the inquest on the body.

County Monaghan Infirmary.

At the monthly meeting of governors of this infirmary held on Jan. 12th, Dr. J. Campbell Hall submitted his annual report for the year ending Jan 5th, 1898. During this time there have been 547 intern and 2574 extern patients, a total of 3121. The diseases treated were of the usual class and point to no special climatic conditions during this period with the exception that some acute pulmonary affections showed a tendency to assume a mixed type and run an abnormal course, thus suggesting the continuance of influenza in a more or less modified form. All the surgical operations (which were more numerous this year than usual and some of them very formidable) ended successfully except one. Several new beds have been presented by friends of the charity.

Exceptional Weather in Ulster.

Not even the "oldest inhabitant" of Belfast can ever remember such extraordinarily fine weather in winter as has been experienced in that city and all over Ulster since the present year set in. There is a beautiful sunrise succeeded by warm dry days with a temperature outside rising often as high as 56° F. and followed by evenings and nights such as are experienced in spring. As a result people are wearing light clothes already, and there is plenty of cycling. Notwithstanding this mild weather there is a good deal of sickness and influenza is very prevalent.

Death of Mr. T. G. Millerick, L.R.C.P. & S. Lond.

Mr. T. G. Millerick, Dispensary Medical Officer, Waterville, Co. Kerry, died on the 11th inst. His death is attributed to a severe wetting he received the previous Friday whilst proceeding to attend a dispensary patient. The newspapers, referring to his death, describe him as a martyr to duty. The Cahirciveen Board of Guardians spoke in the kindliest terms of him and his untimely death—he was only thirty-three years of age—ought to impress on the public mind the risks run by members of the medical profession.

Jan. 17th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Gastro-enterostomy.

THE subject of gastro-enterostomy continues to form a matter for discussion at the Society of Surgery. At the meeting of Dec. 22nd, 1897, M. Tuffier announced that he had operated on three patients suffering from ulcer of the stomach which was far advanced. In all three cases there was considerable hæmorrhage and in two of them it remained unaffected by treatment. Two of the patients were strong men who were reduced to a state of extreme anæmia with profound cachexia; the third case was a woman who also suffered from peritonitis. In the first case the ulcer was situated on the lesser curvature and was adherent to the lower surface

of the liver; in the second case it was close to the pylorus; and in the third case it was on the greater curvature in about its upper third. The ulcer in the first case formed, together with the liver, a hard mass closely resembling a new growth; the ulcer in the second case was sharply defined; but in the case of the woman there was peritonitis with yellowish fluid in the abdomen and the stomach was firmly adherent to the false ribs. In all three cases M. Tuffier performed gastro-enterostomy behind the transverse meso-colon. The first patient died and the post-mortem examination showed nothing but an ulcer on the inferior surface of the liver. The second patient, who had vomited a washhand-basin full of blood, left the hospital able to eat ordinary diet. The woman got well so quickly that after the fourth day she wanted to give up the milk diet upon which she had been living for the last three years. This operation does away with gastric retention and places the organ at rest. It is evident that it acts in this way, for relief is so rapid that the ulcer cannot have time to heal. Although gastric digestion continues after the operation the stomach contracts directly this digestion is far enough advanced and so passes the food on without having to struggle against the contracted pylorus. M. Tuffier also showed an "angiotribe" by means of which he had been able to perform two hysterectomies without using either ligatures or forceps. There was no hæmorrhage. At the meeting of Dec. 29th the discussion on gastro-enterostomy was resumed. M. Hartmann had operated on a man thirty years old who had suffered from profuse hæmorrhages. The post-mortem examination showed a simple erosion which resembled a scratch and could not have been diagnosed during life. In his own opinion the operation is not advisable for patients suffering from profuse hæmatemesis. Complete rest and low diet yield good results in most cases. Another very important point is the curative influence of gastro-enterostomy on ulcers in process of formation. This is indisputable. The cure is due to the fact of the organ being placed at rest. Doyen and Carle attach great importance to spasm of the pylorus, not only in cases of ulcer, but also in cases of excessive secretion of hydrochloric acid. M. Hartmann goes still further and agrees with Defontaine that surgical intervention is indicated in all cases of profound dyspepsia which are not benefited by medical treatment. He had performed an anterior gastro-enterostomy on a woman aged forty years who suffered from epigastric and vertebral pain four or five hours after eating with repeated attacks of vomiting. There was much wasting, the stomach was perfectly empty, the test meal showed an almost complete absence of hydrochloric acid, but there was no dilatation. Operation cured this woman, who gained in weight. It is quite certain that after an opening into the jejunum every process of gastric digestion is gone through. The organ is placed in a state of repose without being actually drained. M. Boutier agreed with these opinions. He considered that in every case of gastritis where the etiology was obscure operation would yield excellent results. M. Tuffier, in reply, said that he was astonished that anybody should confound a hæmorrhagic erosion with a simple ulcer. When an operation was undertaken for hæmatemesis following upon ulcer exploration of the stomach allows the operator to recognise the lesion and to make up his mind as to further operation. On the other hand, erosions are quite unrecognisable even by exploration; on opening the stomach one sees nothing, as in the case reported by Salzer and Hirsch. As for indications for operation, M. Tuffier considered that surgery should begin at that point where medicine failed; where there was vomiting or hæmatemesis careful examinations should be made and the symptoms studied before resorting to surgical interference in any case of grave dyspepsia. M. Tuffier prefers the method of von Hackler to any other. He closes the hole in the meso-colon by two stitches, attaching it to the stomach, so that there is no danger of the intestine slipping through. He sutures the tissues in two layers, which is, he thinks, a better method than taking up the whole thickness of the wall at once as M. Hartmann does.

Reading through Opaque Substances.

The press has been greatly exercised about a so-called experiment in reading through opaque bodies, an experiment of which Dr. Ferroul, of Montpellier, affirmed the reality. The Academy of Science and Literature at Montpellier appointed a commission of inquiry the members of which were M. Bertin-Sans, in charge of the department of physics at the Faculty of Medicine; M. Guibal *bâtonnier*, of the Faculty of Law; M. Meslin, Professor of Physics at the Faculty of Science; and M. Grasset, Professor of Chemistry at the Faculty of Montpellier. These gentlemen went to Narbonne, where Dr. Ferroul had agreed that the meeting should be held. Three experiments had been prepared with every precaution and the two following were carried out. The subject had in the presence of the Commission (1) to read at a distance folded paper enclosed in a box along with two undeveloped photographic plates; and (2) to read a folded and sealed paper which one of the Commissioners should hold before her at any distance and for as long a time as she liked, without ever letting it go. These two experiments, made in the presence of and with the full consent of Dr. Ferroul, who in common with members of the Commission was ignorant of the contents of the paper, yielded an absolutely negative result.

Jan. 17th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Italy's "Foundling Shambles."

"UN vero macello dei esposti"—the phrase is not mine but that of Signor Plutino, the prefect of Avellino, chief town of the province of that name, within three hours east of Naples by rail. Avellino, like most Italian centres, has its "Brefotrofio" or foundling hospital, and also, like most of these, its "brefotrofio" is a model of mismanagement, presenting under the limelight of official inspection a state of things for which the only epithet is "inhuman." Last summer a thrill of horror ran through Italy (and indeed wherever the facts were published) on its being made known that the great foundling hospital of the Annunziata at Naples was really a "campo santo dei bambini" (a graveyard of infancy) with a death-rate of well-nigh 100 per cent.! Now it appears that that record is beaten by Avellino, where the foundling hospital actually attains the mortality of 100 per cent. Signor Plutino, whose letter to the Syndic of the town first drew attention to the "orrendo spettacolo" afforded by its "brefotrofio," was followed by the Councillor Signor Abetti who with the aid of the provincial medical authority tested the facts by personal inquiry. This gentleman says (I quote his very words): "La causa della mortalità che rappresenta il 100 per cento è dovuta esclusivamente allo scarsissimo numero di balie" (the cause of the death-rate representing 100 per cent. is due exclusively to the very scanty number of nurses); and then he proceeds to set forth the "death by starvation" which is the sure and swift portion of the little unfortunates whom a vicious society throws upon the tender mercies of the hospital. "Tutti i bambini affidati al baliatico interno sono irremissibilmente condannati a morte" (all the infants entrusted to the nursing process within are inexorably condemned to death)—such is the language of Signor Abetti's medical authority. The lay press has thrown open its columns to the revelations and I find in a leading Neapolitan journal, the *Corriere di Napoli*, that from May to December last sometimes as many as five infants a day were assigned to one single nurse (*cinque bambini ad una sola balia*) in the "brefotrofio" of Avellino! Loud and prolonged are the appeals made to the Government to institute something like the reforms now applied to the "Annunziata" at Naples, which, as I announced last summer, has had its previous administration suspended and its whole management placed under the Cavaliere Pucci, of Florence, a man of approved experience and ability in the control of infant hospitals. As if to shame the supineness of the authorities, central and local, in presence of such a scandal the public are proffering food and comforts to the little inmates of the "brefotrofio" and a well-known pharmaceutical firm of Naples (Giovanni Barbero and Co.) announces its readiness to contribute free of charge as many feeding-bottles as may be required, not only by Avellino, but by whatever other "brefotrofi" are similarly short of nurses. Such intervention has already made some small impression upon the death-rate in the Avellinese Hospital, but even my latest intelligence from that "campo santo dei bambini" presents a harrowing picture and still

"dal brefotrofio escono i piccoli cadaveri, quattordici cadaverini su 18 esposti, morti sempre di fame e per mancanza d'ogni più elementare igiene" (from the hospital issue the little corpses, 14 out of 18 foundlings, dead invariably of hunger and through defect of every requisite of the most elementary hygiene).

Jan. 15th.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated at the meeting of the Examiners:—

Monday, Jan. 10th:

Anatomy and Physiology.—Walter Lister, Henry Lawrence Atkinson, and Harry Cole Alderman, Yorkshire College, Leeds; James Christopher Wadmore and John Chalmers Norton, University College, Bristol; Robert Alister L. Graham, and William John Hogg, Queens College, Belfast; John Llewelyn Prichard, Edward Giles Narramore, and Richard Henry Crompton, University College, Liverpool; Charles Cecil W. Mays, Firth College, Sheffield, and Mr. Cooke's School of Anatomy and Physiology; Arthur Wilson S. de Vine, Mason College, Birmingham; Arthur Hurrell Style, Cambridge University and St. George's Hospital; Edmund Henderson Hunt, Oxford University; Leslie Haden Guest, Owens College, Manchester; Philip Savill, University College, London; Herbert Stocker Harris and William Charles Mence, St. Thomas's Hospital; Percy Stanley Blaker, Medical College, Calcutta; and John Henry McAilum, Cambridge University and London Hospital.

Anatomy only.—Alexander Apfell Vernon, Long Island College Hospital, New York; and John Philip E. Henery, St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Twenty gentlemen were referred in both subjects and two in Physiology only.

Tuesday, Jan. 11th:

Anatomy and Physiology.—Richard Arthur Jones, Charing-cross Hospital and Mr. Cooke's School of Anatomy and Physiology; Samuel Jonathan D. Esser and Archibald Sinclair David, London Hospital; Thomas Hugh J. Ellis Hughes, George J. Smith Atkinson, Augustus de Morgan, William Sidney Page, and William Gordon Speers, St. Mary's Hospital; Ernest Sheiton-Jones and Baltasar Rodil, Guy's Hospital; James Bernard Chalmers-Francis, Westminster Hospital and Mr. Cooke's School of Anatomy and Physiology; Stanley Coleman Jellicoe and Sydney M. Woolner Meadows, Middlesex Hospital; Robert Martin McQueen, St. George's Hospital; Malcolm Bell Hay, Frederick Kincaid Etlinger, and John Sherwood New, University College, London; George Eliott Cathcart, St. Bartholomew's Hospital; and Robert Sturgeon Cocke, King's College, London.

Anatomy only.—Fred Algernon Simpson, Cambridge University and St. Mary's Hospital; and Charles Crozier Tandy Magee, Melbourne University and London Hospital.

Seventeen gentlemen were referred in both subjects, one in Anatomy only, and two in Physiology only.

Wednesday, Jan. 12th:

Anatomy and Physiology.—Alexander Charles Newport, Charing-cross Hospital; Percy Francis Alderson, Middlesex Hospital; Edgar Dyke Smith, Frederic Ernest Taylor, and Ernest Beadon Dixon Adams, St. Bartholomew's Hospital; Daniel C. O'Connell Finigan, Berlin and Kiel Universities and St. Bartholomew's Hospital; Maurice Dunbar Wood, Thomas Thelwell Kelly, Thomas Richard Beale-Browne, Richard Denton Attwood, Emile John F. Hardenberg, and Robert Tilbury, Guy's Hospital; Victor R. Fowell Kroenig, and Cecil Edward Bulteel, King's College, London; Arthur Sydney Downton, William Henry Davidson, and Arthur Harold Williams, London Hospital; Clare Aveling Wiggins, St. Mary's Hospital; and Arthur de Visine Blathwayt, University College, London.

Seventeen gentlemen were referred in both subjects.

Thursday, Jan. 13th:

Anatomy and Physiology.—Arthur Hamilton Tovey, St. George's Hospital; Evelyn Charles Hepper and James Fenwick Robertson, St. Bartholomew's Hospital; William Percival Ker, Percy Stephen Mandy and James Lawson Whatley, Guy's Hospital; Maurice Willoughby Haydon, St. Thomas's Hospital; Charles Alfred Marsh and Baba Makham Singh Sodhi, London Hospital; Kenneth Hugh Bennett, University College, London; Harry Cecil Baker, Ernest Frederick Sail and William Rhodes Harrison, St. Mary's Hospital; Theodoor Domelá Nieuwenhuis, Lausanne and Zurich Universities.

Physiology only.—Campbell Tilbury Fox, University College, London.

Fifteen gentlemen were referred in both subjects and one in Anatomy only.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having previously passed the necessary examinations, and having now attained the legal age of twenty-five years, has been admitted a Fellow of the College, viz.:—

Steward, Francis James, M.B., B.S. Lond., L.R.C.P. Lond., Guy's Hospital; date of Membership July 29th, 1895.

The following gentleman, having previously passed the necessary examinations and having conformed to the by-laws and regulations, has been admitted a Member of the College, viz.:—

Kinsey-Morgan, Augustus, Exams. for L.R.C.P. Lond., Guy's Hospital.

MEDICAL MAGISTRATES.—Mr. R. McNeill, M.D. Edin., D.P.H. Camb., of Oban, N.B., and Mr. Walter A. S. Bridgeford, L.R.C.P. Edin., M.R.C.S., of Boulder City, West Australia, have been appointed magistrates for the County of Argyll, and the East Coolgardie district, West Australia, respectively.

SOCIETY FOR THE STUDY OF INEBRIETY.—At a quarterly meeting held on Jan. 13th, the President, Dr. Norman Kerr, in the chair, Mr. W. L. Brown, L.R.C.P. Edin., read a paper on Inebriety and its Cure among the Ancients. The various modes of prophylaxis came under review. The true cure was stated to be remedial treatment for an abnormal mental condition.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the Directors of the society was held on Jan. 12th, Dr. Pollock, Vice-President, being in the chair.—It was resolved to distribute on Jan. 19th £1222 10*s.* among fifty widows, three orphans, and the five recipients on the Copeland Fund. Application for assistance was read from a widow for herself and son aged thirteen years, and a grant at the rate of £50 per annum was made to the widow and one of £12 per annum to the son. One member was elected and the death of one reported. The Christmas present amounting to £934 had been made on Dec. 20th to the widows and orphans on the Funds. A committee was appointed to draw up the report for 1897. The expenses for the quarter were £75 19*s.* 6*d.* The Secretary was desired to convey to the President, Sir J. Paget, Bart., the best wishes of the Directors for his health and happiness during the present year.

PRESENTATIONS TO MEDICAL MEN.—Mr. Tom B. Brooke, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., medical superintendent, River Ambulance Service, Metropolitan Asylums Board, has been the recipient of a cruet stand from the nursing and domestic staff of the service and also a marble clock from the male staff on the occasion of his leaving the service.—At a social meeting and presentation of prizes of the ambulance class of the Uddingston Ambulance Association held in the public hall on the 13th inst. Mr. R. Thomson, M.B., C.M. Aberd., of Uddingston, was presented with a case of surgical instruments as a token of esteem from the class.—Mr. John G. Havelock, M.D. Edin., Medical Superintendent of the Royal Asylum, Montrose, has been presented with a marble timepiece bearing the following inscription: "Presented to Dr. John G. Havelock, on the occasion of his marriage, by the staff of Montrose Royal Asylum, 18th January, 1898," as a token of esteem and regard.

NEWCASTLE ROYAL INFIRMARY.—It has been suggested that leasehold portions of the present site of the Newcastle Royal Infirmary should be surrendered to the corporation when the proposed new infirmary on the Leazes site is actually in course of erection, and a special meeting of governors of the infirmary was held on Jan. 4th for the purpose of considering the matter, Lord Ravensworth being in the chair. Mr. Riley Lord in the course of a long speech urged that no part of the £100,000 which had been raised should be used for building purposes, but that the subscribers should be asked to agree to its being made a trust fund, the interest of which should go towards the maintenance of the institution, the fund to be remembered as the Jubilee Trust Fund just as the proposed new infirmary would be remembered as the Hall Infirmary. Mr. J. Hall had promised £100,000 for the new building and £60,000 more could be raised by public subscription, as the 400 beds which it was intended to have would cost £400 each. In reply to some observations made by the chairman relative to the stability of the ground Alderman Stephens said that if the seams were near the surface there would be no difficulty in guarding against any danger, and if they were deep they would not interfere with the suitability of the site. Mr. Lord also added that high buildings were not contemplated and that it was intended to spread them over three or four acres. In the result a resolution authorising the eventual transfer of the land was agreed to.

HAMBROOK VILLAGE HOSPITAL. — Dr. E. Crossman has resigned his appointment as medical director of the village hospital at Hambrook, Gloucestershire. The committee in accepting the resignation expressed their high appreciation of the services which Dr. Crossman had rendered since the foundation of the institution thirty years ago, and added that it was mainly due to his efforts that the "Victoria bed" for the free use of parishioners was endowed. Mr. F. W. Crossman, L.R.C.P. Lond., M.R.C.S. Eng., was appointed to the vacant post.

THE LATE MR. H. W. RANDOLPH.—Mr. Henry Weech Randolph, M.R.C.S. Eng., L.S.A., was buried at Milverton, Somerset, on Jan. 10th. The deceased, who was ninety years of age at the time of his death, obtained his qualifications from the Royal College of Surgeons of England and the Society of Apothecaries in 1830 and 1829 respectively, having been a pupil of Abernethy. Mr. Randolph was consulting surgeon to the Wiveliscombe Dispensary and in 1874 was President of the West Somerset branch of the British Medical Association.

THE BRITISH ASSOCIATION.—A meeting of the local executive of the British Association was held in Bristol on Jan. 10th. It was mentioned that between £3000 and £4000 will be required in connexion with the forthcoming meeting of the association in Bristol, and the mayor is sending out an appeal to the citizens for this amount. Arrangements are being made for the proposed Biological Exhibition. Several excursions have been planned, amongst these being visits to Bath, where the mayor and citizens will entertain the visitors; Aust, Tortworth, where Lord Ducie will entertain a party; to the Severn Tunnel, Stanton Drew, Cheddar, Glastonbury, Stonehenge, Salisbury, Longleat, Raglan Castle, &c. There are also committees at Montreal and Toronto (at the former city Dr. Bovey and at the latter Dr. Macallum are the honorary secretaries), and it is expected that a considerable number of Canadian visitors will be present at the meeting.

BIRKENHEAD MEDICAL SOCIETY.—At a meeting of this society held on Jan. 14th, Dr. R. Sydney Marsden, President, being in the chair, Mr. H. Laird Pearson read a clinical note on the Treatment of Chorea by Large Doses of Arsenic, beginning with from fifteen to twenty minims. Mr. Pearson laid stress on the necessity of keeping the patient in bed and if vomiting occurred, as it occasionally did in about a week's time, of leaving off the treatment for forty-eight hours.—The President, Mr. Stansfield, Mr. F. Johnson, Dr. Blood, and Dr. Dixon took part in the discussion and Mr. Pearson replied.—Dr. Blood read a note on Ulceration of the Cornea in Females, showing the sympathy that exists between the genital system and the eye.—Mr. Stansfield, Mr. Shears, and Mr. Laird Pearson joined in a discussion and Dr. Blood replied.—Mr. Shears read notes and exhibited (1) a specimen of Intra-ocular Sarcoma and (2) two patients on whom he had performed Mules's Operation.—The President and Mr. Stansfield made remarks and Mr. Shears replied.

DIPHTHERIA IN LONDON IN 1897.—The prevalence of diphtheria in London during the fifty-two registration weeks of 1897 was, as shown by the returns, actually and relatively a good deal less than that recorded in the 53 weeks of the preceding registration year. In 1896 the 14,224 notified cases yielded an average weekly total of 268, and the 12,311 attacks in 1897 produced an average of 246 cases weekly. In 1896 the four-weekly periods showing largest records, taken in decreasing order, were September, October, and July, while in 1897 they were October, September, and November. In both years the lowest records were in April and May. In thirteen successive four-weekly periods of 1896 the notified cases were 915, 916, 902, 730, 777, 895, 1011, 1111, 866, 1169, 1336, 1119, and 1064. The various districts of London were, as was to be expected, very differently invaded by the disease. Ten districts last year had upwards of 500 cases notified in each and an aggregate of 6802 cases, whereas other ten districts had only 478 cases in all. The registered deaths attributed to diphtheria in the several quarters of 1897 were fewer than in 1896. The 2683 deaths in 1896 yielded a case mortality-rate of 18·9 per cent. The deaths fell to 2262 last year, and yielded a case mortality-rate of 17·7 per cent. Hence last year there was a fall both in the amount and the fatality of diphtheria in the metropolis as compared with 1896.

KING'S COLLEGE HOSPITAL, LONDON.—The proceeds of Sir Squire Bancroft's recent reading at Lincoln's Inn, on behalf of this hospital, amounted to £122 11*s*.

VICTORIA JUBILEE NURSES' HOME AT BARRY.—At a meeting of the Executive Committee of this institution held on Jan. 11th the amended plans for the erection of the Victoria Jubilee Nurses' Home at a cost of £1500 were approved. It was reported that last year the Nursing Association was in debt to the extent of £100 and the accident hospital had a deficit of £150.

CONTRIBUTIONS TO THE BRISTOL MEDICAL CHARITIES.—During 1897 the workpeople of Messrs. J. S. Fry and Sons, of Bristol, have contributed by weekly collections the sum of £681 9*s*. 2*d*. This sum has been divided amongst the medical charities of the city, £230 being awarded to the Dispensary, £151 to the Infirmary, £145 to the General Hospital, £57 to the Children's Hospital, and the remainder to various other institutions.

OYSTERS AND SEWAGE.—Professor Kanthack, of Cambridge University, in a report to the Truro Corporation on samples of oysters taken from the foreshore at Malpas and beds lower down the river, has stated that in the former there was evidence of sewage contamination, but that no typhoid fever germs were detected. At the meeting of the Corporation held on Jan. 11th the Sanitary Committee recommended that the laying down of oysters on the foreshore at Malpas be prohibited.

TYPHOID FEVER AT CAMBORNE.—At a recent meeting of the Camborne District Council Mr. J. T. Thomas, L.R.C.P. Lond., M.R.C.S. Eng., the medical officer of health, reported that the epidemic of typhoid fever showed every sign of decreasing. There had been 29 cases notified since the last meeting of the Council, but only 6 of these were during the past week; there were 9 cases in the isolation hospital. A letter was read from the Local Government Board enclosing a letter from the steward of Mr. Basset, who owns a third of the town and a large area in the neighbourhood; this complained of the scavenging work and said that since the district council took office only one scavenging cart was kept, the result being that deposits of filth had accumulated. It further added that the greater part of the town consisted of occupiers of small houses who earned less than £1 per week, and the council attempted to make these people do their own scavenging or arrange for it to be done, a thing which they had neither the means nor the inclination to do. The clerk mentioned that Dr. Bruce Low had given him to understand that if the council did not do what was necessary for the cleansing of the district it would be done for them and the expense would be charged to them.

BRITISH GYNÆCOLOGICAL SOCIETY.—The annual meeting of this society was held on Jan. 13th, Professor A. W. Mayo Robson, President, being in the chair. The reports of the treasurer and the editor having been read, the following gentlemen were elected officers for 1898:—President: Dr. H. Macnaughton-Jones, London. Vice-Presidents: Dr. G. G. Bantock, London; Professor J. W. Byers, Belfast; Dr. A. E. Cordes, Geneva; Dr. G. Elder, Nottingham; Dr. R. A. Hodgson, London; Mr. F. Bowreman Jessett, London; Dr. J. J. Macan, London; Professor W. L. Reid, Glasgow; Dr. C. H. F. Routh, London; Dr. F. F. Schacht, London; Dr. W. Travers, London; and Professor Hector Treub, Amsterdam. Treasurer: Dr. J. A. Mansell Moullin, London. Council: Mr. W. Armstrong, Buxton; Mr. E. Tenison Collins, Cardiff; Dr. A. Donald, Manchester; Dr. F. Edge, Wolverhampton; Dr. C. H. Gage-Brown, London; Dr. C. Godson, London; Dr. F. N. Haultain, Edinburgh; Dr. W. Balls Headley, Melbourne; Dr. P. L. Hebert, London; Dr. H. S. Howell, London; Dr. Skene Keith, London; Dr. R. Marsden Low, London; Mr. Christopher Martin, Birmingham; Professor A. W. Mayo Robson, Leeds; Mr. W. H. Newnham, Clifton; Dr. James Oliver, London; Dr. H. F. Powell, London; Professor A. J. Smith, Dublin; Dr. Heywood Smith, London; Dr. R. T. Smith, London; Mr. E. T. Smith, London; Dr. D. Thomson, London; Dr. John Wallace, Liverpool; and Dr. W. S. Wyman, London. Editor of Journal: Dr. F. F. Schacht, London. Hon. Secretaries: Dr. George Keith, London; and Dr. Arthur E. Giles, London.

DEVON COUNTY JUBILEE FUND.—Lord Clinton reports that the total amount of the first year's contributions to the Devon County Jubilee Fund is £6339. It is intended that a permanent hospitals endowment fund to commemorate Her Majesty's long reign shall eventually be established. Lord Clinton has just contributed a second donation of £50.

HEALTH OF CARDIFF.—At the meeting of the Cardiff Health Committee held on Jan. 11th Dr. Walford, the medical officer of health, reported that there were 5279 births in Cardiff during 1897, equal to a rate of 31 per 1000. The deaths numbered 2534, which was equal to 14·9 per 1000. The death-rate from zymotic diseases was 2·1 per 1000. There were 93 deaths attributed to violence and 186 inquests had been held.

ST. THOMAS'S (EXETER) RURAL DISTRICT.—Mr. Mark Farrant, L.R.C.P. Lond., M.R.C.S. Eng., the medical officer of health, in his annual report for 1897, stated that the population of the district was 26,890. The total number of deaths during the year had been 430, at the rate of 13·2 per 1000, the average for the whole of South Devon being 15·9. The births numbered 651, a rate of 24·2, the average for South Devon being 24·8.

HOSPITAL SUNDAY IN BRISTOL.—Hospital Sunday is to be observed in Bristol on Jan. 30th. The committee have decided that the Royal Infirmary, General Hospital, Children's Hospital, Eye Hospital, Eye Dispensary, Orthopædic Hospital, and the Lock Hospital shall share in the funds and the mayor has issued a circular to all the clergy drawing attention to the increasing usefulness of these institutions.

LARYNGOLOGICAL SOCIETY OF LONDON.—The following is the list of officers and council for 1898:—President: Mr. H. Trentham Butlin. Vice-presidents: Dr. J. W. Bond, Dr. A. Bronner, Dr. H. de Havilland Hall, Dr. Scanes Spicer, and Dr. T. J. Walker. Treasurer: Mr. W. J. Walsham. Librarian: Dr. J. Dundas Grant. Secretaries: Dr. Herbert Tilley and Dr. William Hill. Council: Dr. A. A. Kanthack, Sir F. Semon, Mr. W. R. H. Stewart, Dr. St. Clair Thomson, and Dr. P. Watson Williams.

SANITARY MATTERS IN ST. JUST, CORNWALL.—At a meeting of the St. Just Urban Council Mr. C. S Jago, M.R.C.S. Eng., L.S.A., in presenting his annual report mentioned that in 1897 there had been three deaths from typhoid fever out of some twenty cases which had occurred, the majority of these having been caused by impure milk. Ten samples of water taken from wells of the district were analysed with the result that only two of these were found to be fit for drinking purposes. The Local Government Board wrote asking whether the council had yet fixed the date for the Infectious Diseases Notification Act to come into operation. A member proposed that the Act should come into force on Feb. 1st, but an amendment "that the matter be deferred to a more convenient season" was carried by the casting vote of the chairman.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting of the institution held on Jan. 13th, 1898, the following list of office bearers, council, and committees was adopted:—President: W. Macfie Campbell, M.D. Edin. Vice-Presidents: K. A. Grossmann, M.D. Freib., A. C. E. Harris, M.B. Edin., R. S. Archer, M.D. Dub., and Henry Harvey, M.B. Edin. Honorary Treasurer: James Armstrong, M.B. Edin. Honorary General Secretary: J. M. Hunt, M.B. Glasg. Honorary Secretary to the Ordinary Meetings: W. Thelwall Thomas, F.R.C.S. Eng. Honorary Librarian: T. R. Bradshaw, M.D. Dub. Council: A. Bernard, M.B. Dub., C. T. Holland, L.R.C.P. Lond., T. D. Leigh, M.R.C.S. Eng., G. P. Newbolt, F.R.C.S. Eng., W. Permewan M.D. Lond., R. I. Richardson, M.B. Edin., R. Caton, M.D. Edin., E. A. Browne, F.R.C.S. Edin., Arthur Wallace, M.D. Edin., Leslie Roberts, M.D. Edin., F. H. Barendt, M.D. Lond., and Francis Johnston, M.D. Glasg. Pathological and Microscopical Committee: J. H. Abram, M.D. Lond., F. H. Barendt, M.D. Lond., R. A. Bickersteth, F.R.C.S. Eng., Rubert Boyce, M.B. Lond., A. W. Campbell, M.D. Edin., F. C. Larkin, F.R.C.S. Eng., C. Macalister, M.D. Edin., G. P. Newbolt, F.R.C.S. Eng., F. T. Paul, F.R.C.S. Eng., and C. S. Sherrington, F.R.S. Journal Committee: The President, the Editor, the Hon. Secretary to the Ordinary Meetings, the Hon. Secretary to the Pathological Section, the Hon. Librarian, Rubert Boyce, M.B. Lond., F. H. Barendt, M.D. Lond., T. B. Grimsdale, M.B. Cantab., Charles Lee, M.R.C.S. Eng., C. Macalister, M.D. Edin., G. P. Newbolt, F.R.C.S. Eng., and W. Permewan, M.D. Lond.

THE KILMARNOCK INFIRMARY.—The twenty-ninth annual report of this institution states that the number of patients treated during 1896-97 was 931. The total annual income was £3351 10*s.* 6*d.* The directors call attention to the yearly increasing financial need of the institution.

MASON UNIVERSITY COLLEGE, Birmingham, has recently been incorporated by the Mason University College Act, 1897, and the first meeting of the Court of Governors was held on Jan. 13th. Prior to the meeting the Right Hon. the Lord Mayor of Birmingham entertained the Governors at luncheon in the Council House, when the President of the College (the Right Hon. J. Chamberlain, M.P.) made an important speech on the subject of a Midland University.

ROENTGEN SOCIETY.—A meeting of this society was held on Jan. 11th at 11, Chandos-street, W., Professor Silvanus Thompson being in the chair. A paper on Practical X Ray Work was read by Mr. W. Webster, F.C.S. For a primary battery he recommended the "Holmes-Burke" type charged with nitrate of soda and sulphuric acid; a good secondary battery was, however, altogether the best for practical work. The best coils were those of English make. The one he used was known as a "Newton-Apps" and gave a twenty-inch continuous spark. He added a pneumatic buffer to regulate the "make and break," the sparking of which was thereby rendered almost infinitesimal. Mr. Webster then referred to the work done with vacuum tubes many years ago by Sir William Crookes and exhibited the first focus tube made by Mr. Herbert Jackson in 1894. In that same year Mr. Herbert Jackson experimented with small potassium platino-cyanide screens and demonstrated that wood and vulcanite were pervious to rays produced by the same tube; also that metals were impervious to certain rays and pervious in varying degree to others. By observing the bones in his fingers Professor Roentgen put the finishing touch to the work of the two Englishmen. Mr. Webster "conditioned" his tubes by alternate heating and cooling. By "condition" he meant an almost straw-coloured anode with a white-hot nucleus, without any blue or magenta phosphorescence behind the anode. The latter, if continued only for a few seconds, might destroy the tube. This he termed the electrical molecular spheroidal condition. Sometimes it was double and that gave the best penetration. Before he adopted the plan of heating the tube he never noticed any ill effects upon the skin. Since then his right hand, which had been affected with gouty eczema some twenty-four years previously, was attacked with dermatitis and the nails were shed.—A discussion followed in which the President, Mr. Ernest Payne, Dr. Walsh, Dr. Wolfenden, Mr. Wilson Noble, Mr. Trenthal, and Mr. Campbell Swinton took part.—In his reply Mr. Webster said that the "singing anode" indicated an active tube and good penetration.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BENSON, JAS. WAISH, L.R.C.P., L.R.C.S. Irel., L.M., has been appointed Resident Surgeon to the North Riding Infirmary, Middlesbrough, vice G. F. Longbotham, resigned.

BRIGGS, W. P., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer for the Allonby Sanitary District of the Wigton Union.

CRAWFORD, C. R. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fifth Sanitary District of the Tonbridge Union.

CROSSMAN, FRANCIS WARD, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Director to the Hambrook Village Hospital, vice Edward Crossman.

CURTIS, H. J., B.S. Lond., F.R.C.S. Eng., has been appointed Surgical Registrar to University College Hospital, London.

DOBSON, ARTHUR, M.R.C.S. Eng., has been appointed Surgeon to the Ilkeston Hospital and Honorary Lecturer and Surgeon to the Ilkeston Ambulance Association.

FORBES, NORMAN HAY, F.R.C.S. Edin., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Honorary Surgeon and Instructor to the Tunbridge Wells Volunteer Ambulance Corps.

FRASER, H. E., M.B., C.M. Edin., has been appointed Medical Superintendent of the Dundee Infirmary.

GARDNER, W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Nunney District by the Frome Board of Guardians.

GROSS, S., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant House Surgeon to the Salisbury Infirmary.

HARVEY, F., M.R.C.S., has been appointed Public Vaccinator for the Second District of the St. Columb Major Union.

JACKSON, RICHARD ARTHUR, M.R.C.S. Eng., L.R.C.P. Irel., has been appointed Medical Officer for the Kirbymoorside Union and Public Vaccinator for the District of Kirbymoorside.

LUCY, REGINALD H., M.B. Edin., F.R.C.S. Eng., has been appointed Surgeon to the South Devon and East Cornwall Hospital, vice W. Paul Swain.

MELSOME, W. S., M.A., M.D., B.C. Cantab., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Royal United Hospital, Bath.

MCARTHUR, J. H., M.B., C.M. Glasg., has been appointed an Honorary Physician and Surgeon to the Hospital for Diseases of the Ear, Throat, and Skin, Sheffield.

MORRIS, CYRIL GEORGE, L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Royal United Hospital, Bath, vice W. H. Cooke, resigned.

PICKERING, HAROLD J., L.D.S. R.C.S. Eng., has been appointed Assistant Dental Surgeon to the York Dispensary.

PRESTON, J. M. S., M.B., C.M. Edin., has been appointed Assistant Medical Officer to the New Bridge-street Workhouse, Township of Manchester.

RIGDEN, GEO., M.R.C.S., has been re-appointed a Medical Officer of the Canterbury Dispensary.

RIGDEN, BRIAN, M.R.C.S., has been re-appointed Assistant Surgeon to the Canterbury Dispensary.

STILES, HAROLD J., M.B., C.M. Edin., F.R.C.S. Edin., has been appointed a Medical Officer to the Royal Hospital for Sick Children, Edinburgh.

SWAIN, W. PAUL, F.R.C.S. Eng., has been appointed a Consulting Surgeon to the South Devon and East Cornwall Hospital.

VILLIERS, J. H. DE, M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

WALKER, J. S., M.D. St. And., F.R.C.S. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Stoke-on-Trent Rural District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BERRY WOOD ASYLUM, Northampton.—Assistant Medical Officer for five years, unmarried. Salary £150, increasing to £200, with board, lodging, washing, and attendance.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon (to Dispense). Salary £60, with board, residence, and washing.

BRIXTON DISPENSARY.—Resident Medical Officer for two years, unmarried. Salary £150, with furnished apartments, attendance, coal, and gas. Applications to the Secretary, Water-lane, Brixton, S.W.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, S.W.—Honorary Visiting Surgeon to the Western District.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

CHILDREN'S HOSPITAL, Nottingham.—House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, London.—Senior Resident Medical Officer. Salary £70, with board and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Surgeon for six months. Must be unmarried. Salary £20, with board and residence in the hospital.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon for one year. Salary £40, with board and lodging.

HUNTINGDON COUNTY HOSPITAL, Huntingdon.—House Surgeon for one year. Salary £50 per annum, with board and washing.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer for the In-patient Department at Bowdon, Cheshire. Salary £60 per annum, with board, apartments, and washing.

MERCER'S HOSPITAL, Dublin.—A vacancy on the Surgical Staff.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary at the rate of £30 per annum, with board, attendance, and washing.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (ALBANY MEMORIAL), Queen-square, Bloomsbury, London.—Anæsthetist.

ROTHERHAM HOSPITAL AND INFIRMARY.—Assistant House Surgeon. Salary £30 per annum, with board, lodging, and washing.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, London, S.E.—Anæsthetist and Registrar, non-resident. Salary £45 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London.—Surgeon.

SHEFFIELD ROYAL HOSPITAL.—Senior Assistant House Surgeon, unmarried. Salary 70 guineas per annum, with board (exclusive of wine and beer) and lodging.

SUNDERLAND EYE INFIRMARY.—House Surgeon. Salary £150 annually (non-resident).

UNIVERSITY COLLEGE, London.—Assistant Physician.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Assistant House Surgeon for six months. A small honorarium given, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BARKER.—On Jan. 8th, at Haxey, Lincolnshire, the wife of Chesman Barker, M.B. Lond., M.R.C.S., L.R.C.P., of a son.

CLARK.—On Jan. 18th, at Ashbury Cottage, Honor Oak-road, the wife of Charles Alexander Clark, L.D.S., of London-road, Forest-hill, of a daughter.

FLETCHER.—On Jan. 11th, at Luson, Wellington, Som., the wife of Surgeon-Lieutenant Wm. Fletcher, M.S. Corps, of a son.

GALLETLY.—On Jan. 14th, at Northwold, Norfolk, the wife of Wm. Glong Galletly, M.B., C.M. Edin., of a daughter.

STARLING.—On Jan. 18th, at Park-square, Regent's-park, the wife of Ernest H. Starling, M.D., of a son.

WILLS.—On Jan. 15th, at Lower Seymour-street, Portman-square, W., the wife of W. A. Wills, M.D., of a son.

MARRIAGES.

DEMPSTER—HOWARTH.—On Jan. 13th, at St. Margaret's, Westminster, William Thomas Dempster, M.R.C.S., L.R.C.P., of Winsley, South Croydon, to Nellie Hunter Howarth, third daughter of the late James Howarth, of Balham.

HARTNELL—FRY.—On Jan. 12th, at Charlton Church, Dover, Edward Bush Hartnell, L.R.C.P., M.R.C.S., to Ada, daughter of Mr. Thos. Wickens Fry.

HAVELOCK—LOW.—On Jan. 18th, at Seaview, Monifieth, John G. Havelock, M.D., Medical Superintendent Royal Asylum, Sunnyside, Montrose, to Edith Margaret, third daughter of Mr. James F. Low, of Seaview, Monifieth, Forfarshire.

TURNER—DAWSON.—On Jan. 5th, at St. Jude's Church, South Kensington, by the Rev. Eardley Wilmot, vicar, Surgeon-Major W. Turner, A.M.S., to Jeannie Kemp, second daughter of Major R. B. Dawson, J.P. (late Suffolk Regiment), of Nohaville, County Westmeath, Ireland.

DEATHS.

BROOKES.—On Jan. 16th, at 24, Flodden-road, Camberwell, Robert Charles Brookes, M.R.C.S. Eng., L.S.A. Lond., of 137, Westminster Bridge-road, aged 52 years, eldest son of the late Charles Brookes, M.R.C.S. Eng., L.S.A. Lond., of 137, Westminster Bridge-road. R.I.P.

CRAIGIE.—On Jan. 11th, at Savile-row, John Hamilton Craigie, F.R.C.S., aged 55 years.

DEWAR.—On Jan. 14th, at Hamilton House, Pembroke, Peter Forrest Dewar, M.B., C.M., aged 30 years.

GRAYLING.—On Jan. 16th, at his residence, Sittingbourne, Kent, John Grayling, M.D., in his 89th year.

HIGGINS.—On Jan. 14th, at Alfred House, Birkenhead, Charles Hayes Higgins, M.D., M.R.C.P. Lond., F.R.C.S. Eng., F.R.S. Edin., aged 86 years.

LEASK.—On Jan. 16th, at Clarges-street, Piccadilly, Surgeon-Major James Grieg Leask, formerly of Aberdeen, in his 66th year.

MOSES.—On Jan. 16th, at Bainton House, Sherborne, the residence of his nephew, Henry Moses, M.D., late of Bainton House, Reading, and Appleby, aged 80 years.

RENTZSCH.—On Jan. 16th, John Sigismund, son of Sigismund H. Rentzsch, of The Firs, Waltham Cross, Herts, aged 6 months.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (26th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (27th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (29th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.) St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (24th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. T. Bryant: Remarks on Rectal Surgery (illustrated by the drawings of the late Mr. Gowlland).

TUESDAY (25th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Mr. A. Marmaduke Shield: Immunity and Latency after Operations for Reputed Carcinoma of the Breast (illustrated by 108 Tabulated Cases).

WEDNESDAY (26th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—Dr. H. Fox: The Treatment of Constipation.—Dr. B. Dawson: Physical Signs of Stomach Disease and their Relations to Diagnosis and Treatment.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. S. Hyde (Buxton) will introduce a Discussion on the Treatment of Cardiac and Circulatory Affections by Baths, Climate and Exercises.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—4.30 P.M. Council. 5 P.M. Paper: Mr. J. H. Wathen (Clifton): On Local Effects of Iodoform. Cases will be shown by Dr. Savill, Mr. W. T. Freeman, Dr. Walsh, Dr. Abraham, and others.

THURSDAY (27th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8 P.M. Ward Specimens: Mr. Hartridge: (1) Foreign Body lodged in the Eyeball; (2) Rupture of Choroid with extensive Retinal Pigmentation following Severe Concussion of the Globe.—Mr. Lawford: Newly Developed Vessels on the Retina. 8.30 P.M. Papers: Mr. S. Stephenson: Epithelial Xerosis of the Conjunctiva.—Dr. A. Brener: The Functions of the Rods and Cones of the Retina.—Mr. M. Davidson and Mr. T. Collins: The Localisation of Foreign Bodies in the Eye and Orbit by means of Roentgen Rays (with illustrative cases).

FRIDAY (28th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Dr. W. P. Herringham: Sudden Death in Rheumatic Fever due to Myocarditis. Mr. F. C. Abbott: Two Cases of General Peritonitis due to Unusual Causes—(1) Gangrenous Intussusception of Small Intestine; (2) Strangulation of a Meckel's Diverticulum by Itself.—Dr. S. West: Case of Serous Effusion of Fifteen Months' Standing treated by Incision.—Mr. J. Hutchinson, jun.: Internal Strangulation of Loop of small Intestine by a Fibrous Ring detached from an old Hernial Sac, Operation, Recovery.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (Medical Society's Rooms, 11, Chandos-st., Cavendish-sq., W.).—3 P.M. Otology:—Mr. F. Marsh: Notes of Five Cases of Cerebral Abscess due to Ear Disease.—Dr. D. Grant: Case of Otitic Extradural Abscess (with patient). Paper:—Mr. C. A. Ballance: Some Lessons in the Diagnosis and Treatment of Intracranial Complications of Otitis Media gleaned from Fatal Cases; Discussion in which Dr. Hill, Dr. Milligan, Dr. Grant, and others will take part. Mr. St. George Reid: Case of Traumatic Rupture of the Tympanic Membrane. Laryngology, &c.:—Exhibition of Cases by the President, Mr. Wyatt Wingrave, and Dr. F. Spicer. Dr. F. C. Ewing: Case of Recurring Parotitis in a Healthy Child.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

TUESDAY (25th).—WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4.30 P.M. Dr. H. Campbell: On Disorders of the Nervous System Characterised by Widespread Muscular Wasting.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Ferrier: Lecture.

ROYAL INSTITUTION.—3 P.M. Prof. E. Ray Lankester: The Simplest Living Things.

GROSVENOR CRESCENT CLUB (15, Grosvenor-crescent, Hyde Park-corner).—8.15 P.M. Mrs. Scharlieb: Women in the Medical Profession.

WEDNESDAY (26th).—WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Beddard: Heart Disease due to Alcohol.

SOCIETY OF ARTS.—8 P.M. Mr. T. Potter: Fireproof Construction of Domestic Buildings.

THURSDAY (27th).—CHARING-CROSS HOSPITAL.—4 P.M. Dr. Galloway: Demonstration of Dermatological Cases. (Post-graduate Class.)

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: The Halogen Group of Elements.

FRIDAY (28th).—ROYAL INSTITUTION.—9 P.M. Prof. C. L. Morgan: Instinct and Intelligence in Animals.

SATURDAY (29th).—ROYAL INSTITUTION.—3 P.M. Prof. P. Geddes: Cyprus.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

THE NEGRO DEGENERATING IN THE UNITED STATES.

AN article recently appeared in the *New York Medical Record* on the Physical Degeneracy of the Negro. It appears to be an incontrovertible fact that since the abolition of slavery the negro has sadly retrograded from a health point of view. The *New York Medical Record* says: "The race problem in the south seems destined to be settled according to natural laws unless something is done and done soon to save the negro from the results of his own vices and neglect of elementary hygiene laws. Dr. Johnson, of Brunswick, California, himself a coloured physician, has collected the figures of the vital statistics of nearly 300 towns in the Southern States, which show that the death-rate of negroes is double that of whites in the same country; and not only this but that the birth-rate is smaller among the coloured than among the white population." This degeneracy is attributed to carelessness in manner of living and dissipation—characteristics of the negro since his emancipation. In the days of slavery he was looked after well, as it was naturally the object of his owner to keep him in good physical condition. When he was liberated he was like a child let out from school; he had not learned the necessity of self-restraint and he plunged into vice and dissipation. Previously also to its emancipation the negro race enjoyed a comparative immunity from many of the diseases of the white man; for example, tuberculosis and insanity were almost unknown among its members. Now it is stated that the coloured man is liable to contract all the diseases from which the white man suffers. Dr. Matas, of New Orleans, who has made this subject a special study, says that the American coloured man at the present time differs in nearly every respect from the African negro, and that in their proneness to contract disease the black and white inhabitants of the States are on about the same plane.

ARROW POISON IN WEST AFRICA.

Three French naval surgeons, MM. Le Dantec, Boye, and Berenl, have been exploring the extensive region which lies between the River Niger and the French colony of Dahomey, and some account of their observations has appeared in the *Archives de Médecine Navale*. They found that the use of poisoned arrows is by no means so extensive as it once was owing to the native races becoming acquainted with the superior efficacy of firearms, but the

primitive weapons are still the only ones employed by the Tchabéens, the Baribas, and the Bokos, who inhabit the above-mentioned tract of country, a region almost unknown to Europeans. The bows and arrows used by these three tribes are of exactly the same kind, but there are slight differences in the poison, although in Dahomey, as in all parts of Central Africa, the basis of every arrow poison is always an extract of strophanthus. Towards Cape Colony, however, the natives poison their arrows with venom of serpents. Persons wounded by arrows poisoned with strophanthus begin to develop toxic symptoms in from eight to ten minutes after being struck. They become convulsed and death ensues in about thirteen minutes from stoppage of the heart and respiration. Experiments made with the extract showed that fowls were quite unaffected by even ten times the dose which was fatal to a guinea-pig.

ARTIFICIAL RESPIRATION IN SUPPOSED DEATH FROM HANGING.

THE value of "First Aid" instruction given to members of the police force was well exemplified by a case which came before the magistrate at Braintree Police Court on Jan. 1st. A dealer named Edward Quilter was charged with attempting to commit suicide by hanging himself on the previous day. He was found by his wife in a shed, and a neighbour cut him down apparently lifeless. A policeman who was called in used various artificial means of respiration, and after forty minutes Quilter began to breathe normally, though he was unconscious for twelve hours. On recovering he said he knew nothing of what had happened. It would be interesting to know how long he had remained suspended and also the exact position of the rope round the neck. Presumably it lay over the thyroid cartilage, in which position it has been shown that life may be prolonged for a considerable period. The constable is certainly to be commended for the perseverance with which he persisted in the performance of artificial respiration.

"SUNSHINE RECORDS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 1st you give some "sunshine records" of our home health resorts. May I add my record for this place during the ten weeks ending Dec. 18th as it beats that of Hastings by three hours, viz., 223·4 hours, the monthly record being: October, 137; November, 55·4; December to 18th, 31.

I am, Sirs, yours truly,
ROBERT BRUCE, M.R.C.S. Eng., D.P.H.

Milford-on-Sea, Hants, Jan. 4th, 1898.

A QUESTION OF FEES FOR EVIDENCE AT INQUESTS.

To the Editors of THE LANCET.

SIRS,—I should feel greatly obliged if you or some of your readers would give me the benefit of advice. I am a resident medical officer in a Poor-law infirmary in the county of Middlesex. The coroner refuses to allow me fees for professional evidence and post-mortem examinations. Am I entitled to a fee? All Poor-law officers that I know get inquest fees. If I am entitled to a fee how can I claim it? What should be the method of procedure? Thanking you in advance,

I am, Sirs, yours faithfully,
Jan. 18th, 1898. VERY POOR AND LAWLESS.

*** We believe that our correspondent cannot recover a fee.—ED. L.

DEATHS UNDER ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—Could you tell me the number of deaths that have occurred within the last few years from anæsthetics? and of these deaths do you know the number of cases where the anæsthetic was given for dental operations? I am, Sirs, yours faithfully,

W. H. GILMOUR, L.D.S. R.C.S. Eng.

Rodney-street, Liverpool, Jan. 14th, 1898.

*** No more recent numeration of deaths under chloroform has been made than that published by THE LANCET (THE LANCET and Hyderabad Commissions on Chloroform; London: Bedford-street, W.C.), which brings the lists up to 1891. In this the deaths are classified and the number occurring during dental operations given. Professor Gurlt has published the statistics for Germany (Verhandlungen der Deutschen Gesellschaft fur Chirurgie. Berlin, 1897, p. 202).—ED. L.

THE CERTIFYING AND DETENTION OF LUNATICS.

A CASE of great importance not only to medical men but to the community at large came before the Croydon bench of magistrates on Jan. 5th. A young man had been handed over to the medical superintendent of the infirmary that the condition of his mind might be ascertained. This patient apparently should have appeared before the magistrates upon Jan. 5th but upon their taking their seats the clerk mentioned that he had been set at liberty. Mr. Wilson, the medical superintendent, was present and said that he had examined the patient. He had brought him to the court on Jan. 3rd and had told the clerk he was unable to certify him as a lunatic, whereupon the patient had been set at liberty. The clerk said he did not understand what Mr. Wilson was going to do and the magistrates said that the patient had been ordered on Dec. 22nd to be detained for a fortnight and he did not see how it was that he had been released. Mr. Wilson said that he could not certify unless he was satisfied from his own personal observation. He took into consideration facts communicated by others, but unless he was satisfied in addition he could not certify. The magistrate said that if that was the law the law must be altered, for medical men were very diffident in acting in such cases though they were ready enough to run other risks on behalf of their patients. Mr. Wilson said that no risk accrued to him, for as the medical officer of a union he was protected by law. It seems to us that the fault in this case lay not so much with the medical authorities as with the legal. An infirmary is not a prison, and we do not see how the patient could have been detained except by the use of force, which would have been illegal.

THE ELIMINATION OF BACTERIAL TOXINS BY MEANS OF THE SKIN.

To the Editors of THE LANCET.

SIRS,—My practical experience as a hospital physician for over forty years and my own personal experience enable me to endorse Dr. Alfred Salter's paper in THE LANCET of Jan. 15th on the Elimination of Bacterial Toxins by Means of the Skin. His conclusion—viz., "The artificial encouragement of sweating no doubt assists in the elimination of toxin by way of the skin leaving less behind to poison the tissues"—has been fully borne out in my case. Some fifteen years ago I had a severe attack of gouty cystitis and urethritis which confined me to bed for over two months. After turning the corner I had profuse night sweats, waking up after a short sound sleep reeking with moisture, perhaps twice or thrice in the night. I then stripped off my under-garments and nightshirt, had a good rub down, drank some fluid refreshment, and slept again; but the relief in the morning after these sweats was most marked—I felt fresher and better and on the way to recovery. I noticed also a peculiar odour about the sweat. My treatment of acute rheumatic fever is to blanket the patient, encourage sweating by hot fluids and Dr. Basham's drink of nitrate of potass with lemon juice given warm, and the more profuse the perspiration the quicker the patient recovers. Similarly in phthisical sweats. The practical point is to change the garments, rub the skin dry and keep it clean, so that no reabsorption takes place, giving at the same time liquid or semi-solid nutriment.

I am, Sirs, yours faithfully,
ALEXANDER WALLACE, M.D. Oxon.,
Jan. 17th, 1898. Physician, Essex and Colchester Hospital.

MORE UNQUALIFIED PRACTICE.

WE are glad to see that at Kettering County Court a woman has been awarded £40 damages and costs against a herbalist's assistant who had so negligently set her broken arm that she was permanently disabled. Medical evidence was adduced to show that had the injury been properly treated no permanent damage would have resulted. We suppose it is the duty of the Legislature to protect foolish people as far as possible, and in some instances they do it—for example, people are not allowed to go on to thin ice in the public parks; but we are still waiting for a decision as to whether under Clause 6 of the Medical Act of 1886 it is penal for anyone not properly qualified and registered to practise medicine or surgery for gain. Possibly on the analogy of the cases of attempted suicide it might be as well to punish the patient as well as the quack.

A CURIOUS STORY.

To the Editors of THE LANCET.

SIRS,—I should be pleased for the expression of your opinion on the following case. A London consulting physician has a country house in a village in my district, where he frequently spends the week-end, Christmas and Easter holidays, &c. When last here there were indications of an approaching epidemic of influenza. He wrote out a prescription which he handed to a small grocer in the village, telling him to have it made up at a chemist's; this is now sold in the village as the "fever mixture," and people who have symptoms of influenza purchase a bottle which they take. I believe there are also sold in the village Dr. R——'s aperient pills and Dr. R——'s diarrhœa mixture. I have no reason to suppose that Dr. R—— has any pecuniary interest in the sale of these mixtures, but I should be obliged if you would let me know if this is in accordance with the recognised laws of medical ethics and what steps should be taken to put a stop to it. I may say that I am on friendly terms with the aforesaid Dr. R——. I am, Sirs, yours faithfully,

Jan. 14th, 1898. M. C.

*** Dr. R—— should be written to and the possible ill effects of his conduct, which he has certainly not foreseen, should be pointed out to him.—ED. L.

SAUCE FOR THE GOOSE AND GANDER ALIKE.

BEFORE Mr. Lushington at Bow-street on Jan. 14th a solicitor's clerk appeared to two summonses charging him with having falsely pretended to be a solicitor, contrary to the provisions of the Solicitors Act, 37 and 38 Vict., cap. 68, sec. 12. Mr. Humphreys, on behalf of the Incorporated Law Society, said that the defendant acted as clerk to a solicitor and he appeared at a police-court and acted as a solicitor. For the defence it was stated that the defendant had served his time as an articled clerk, but it was not suggested that he was on the Rolls. He had

attended the Court by direction of his principal, merely to obtain an adjournment of the cases for a short time to allow of the latter's being present to conduct them. It was submitted that no one was defrauded. Mr. Lushington said that if these were the defendant's instructions he had not kept to them, but had acted as a solicitor. He would be fined £5 for each offence, with £3 3s. costs; in default, fourteen days' imprisonment. Mr. Humphreys said that he wished to add that the Incorporated Law Society interested themselves in these cases, *not for the benefit of solicitors, but for the protection of the people* who were liable to be defrauded by unauthorised practitioners.

The attitude taken by the Incorporated Law Society with regard to the legal profession and the public is the one which we wish could be taken by the medical profession as represented by the General Medical Council. Whether the existing Medical Acts enable such steps to be taken or not is a point we do not now discuss—while we allow at once that the legal body has an entirely different constitution to the medical body. But if the legal profession can protect itself from the encroachment of irregular practitioners and claim at the same time to be acting not selfishly but for the public good, surely the medical profession ought to be able to do the same.

A QUEER COLLEAGUE.

WE learn from the *West Cumberland Times* of Jan. 12th, that the following were elected officers of the Wyndham Mines Friendly Benefit Society at the recent annual meeting:—Chairman, Mr. D. Jamieson, Egremont. Committee, Messrs. A. Cook, J. Kinsella, W. Graham, J. Ingram, M. Mossop, Egremont; R. Blake, St. Bees; J. Fisher, Wath Brow; and G. Dawson, Cleator Moor. Joint Secretaries, Messrs. Joseph Irving and W. T. James, re-elected; the medical officer, Mr. Braithwaite, Egremont, re-elected. It was also resolved, says the same account, that in the case of a bonesetter being required Mr. Wilson, of Aspatria, should be engaged and that his fee should be paid out of the funds of the club. We presume that this resolution will lead, or has led, to the immediate resignation of Mr. Braithwaite, seeing that it is incompatible with the duties of a medical man, as well as with the dignity of the profession to which he belongs, that he should publicly figure as the colleague of a quack. In our opinion he even risks his position on the Medical Register by so doing.

A QUERY AS TO UNNECESSARY INQUESTS.

To the Editors of THE LANCET.

SIRS,—I should be glad if you would favour me with an opinion on the following case. A person (a male) falls down twice in the street apparently in a fit; is carried home, seen, and attended during life by a medical man and dies within a short period. An inquest is then held with the idea of determining whether the deceased might or might not have fractured his skull in the act of falling. There was no scalp wound or other evidence that he had fallen with undue violence nor were there any suspicious circumstances connected with the case. I submit, therefore, that these conditions, coupled with the fact that in the possible contingency of a fracture the discovery would be one rather of medical interest than legal import, as clearly nobody would be to blame, rendered an inquest quite unnecessary; and I further submit that it was open to the medical man in attendance, in the event of misgivings, either to ask the friends of deceased for a post-mortem examination in the absence of suspicious circumstances or to represent to the coroner his views of the case. The necropsy is said to have disclosed death from apoplexy.—I am, Sirs, yours faithfully,

Jan. 18th, 1898. S.

*** In the particular case instanced by our correspondent the inquest might have been unnecessary. We do not know if he is familiar with all the facts and our knowledge is limited to what he tells us, but as a general rule an inquest in a doubtful case is to the benefit of the relatives and therefore of the community.—ED. L.

A PROFESSOR OF CLINICAL NURSING.

THE *Nursing Record* states "that the University of Texas has formed a Nursing Department, and has recognised the head of the Nurse Training School as one of the professors of the University with a chair of Clinical Nursing. The lady in question is in future to teach not only the pupil-nurses but all the medical students at the University Hospital in the details of nursing. She has to give both lectures and bedside instruction, and there can be no doubt that the new departure will be of the greatest importance to the Medical Department as well as to the nurses."

THE TREATMENT OF CHRONIC PROSTATITIS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers kindly suggest any remedy that they can confidently recommend for the treatment of chronic prostatitis? My patient has suffered for some years and has tried a variety of remedies with little or no permanent good result. He seems to be worse in cold and damp weather, and then complains of frequent attacks of dull aching pain referred to the lower end of the rectum accompanied by tenesmus and frequent calls to micturate. He also suffers from some dysuria which appears to be more or less of a nervous origin. I am, Sirs, yours faithfully,

Jan. 7th, 1898. MEDICUS.

*** Our correspondent knows well the obstinate nature of the disease, but we notice that he considers the dysuria not to be of organic origin.—ED. L.

WOOLLEN UNDERCLOTHING.

We have received from the British Hygienic Woollen Company, of Leicester, samples of their woollen underclothing. We have had the articles in question—which are well and carefully made—tested and they have been found extremely comfortable. The seams are made with selvedged edges which facilitates repairing and causes the goods to wear longer. The goods are, wherever practicable, shaped in the process of manufacture, which is an obvious advantage as it saves cutting out. The goods we have found to shrink very little when washed.

"MR. HALL HAINS'S DEFENCE FUND."

To the Editors of THE LANCET.

SIRS,—Will you kindly insert enclosed list of additional subscriptions? I am, Sirs, yours faithfully,

HERBERT CARRE-SMITH,
Hon. Secretary and Treasurer to the Fund.

3, Turnham-green-terrace, Chiswick, W., Jan. 18th, 1898.

	£	s.	d.		£	s.	d.
Amount previously acknowledged	94	8	0	Mr. Henry T. Butlin, F.R.C.S. Eng.	2	2	0
Brigade-Surgeon-Lieutenant-Colonel Purves	1	1	0	Mr. T. M. Allison, M.D. Durh.	1	1	0
Mr Arthur Roberts, M.D. St. And.	0	10	6				

Dubitans.—There is nothing to show that B's diagnosis was actuated by any desire to do a fellow practitioner an injury. And whatever B may have meant our correspondent's statement shows the diagnosis to have been wrong, so that the mischief must have recoiled upon B. With regard to B having applied for a post in another's occupation we think that "Dubitans" should make certain that he knew the appointment to have been already made elsewhere when he applied for it before he brings any charge against him. If B tried to supplant our correspondent exactly in the manner that has been described to us he behaved in an unprofessional manner, but not, we think, in a manner of which the General Medical Council could take official notice.

Colliery Surgeon.—For reasons of expediency it may be well for our correspondent to follow the example of his predecessor and his neighbours, but we see no other reasons for such wholesale generosity.

A. B. C. should consult a medical man who will be able to tell him whether any operative measures should be taken. We do not recommend medical practitioners or suggest treatment.

M.R.C.S.—We consider the publication in a lay paper of such a "medical opinion" distinctly regrettable, particularly as the medical man gives his address.

Mr. J. W. Moody is thanked for his interesting communication. Would it be possible to get a pathological opinion upon the thrombus?

C. H. has not enclosed his name and full address.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 20th, 1898

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Jan. 14	30·45	S.	...	47	47	44	44	45	Overcast
,, 15	30·57	S.E.	...	53	46	43	43	45	Overcast
,, 16	30·67	N.E.	...	43	41	37	37	38	Overcast
,, 17	30·46	S.W.	...	45	45	34	34	34	Foggy
,, 18	30·38	S.W.	...	69	53	34	44	45	Foggy
,, 19	30·32	S.W.	0·04	58	55	45	49	51	Cloudy
,, 20	30·32	S.W.	...	55	54	51	51	52	Overcast

During the week marked copies of the following newspapers have been received: *Eastern Morning News, Manchester Guardian, Kidderminster Shuttle, Durham Chronicle, Nottingham Guardian, East Anglian Daily Times, Western Morning News, Cape Times, Times of India, Hull News, Pioneer Mail, Huddersfield Chronicle, New York Tribune, Glasgow Herald, Leamington Chronicle, Wolverhampton Chronicle, Somerset County Herald, Sheffield Telegraph, Liverpool Daily Post, West Briton Advertiser, Evesham Journal, Architect, Essex Telegraph, Cambridge Express, Builder, Grimsby News, Leeds Mercury, Essex County Chronicle, Birmingham Gazette, Brighton Gazette, Yorkshire Post, Bucks Herald, Norwich Mercury, Harrogate Advertiser, Portsmouth Times, Bristol Mercury, Hereford Times, Wellington Journal, Bath Chronicle, West Cumberland Times, Sanitary Record, Baker's Times, City Press, Hertfordshire Mercury, Reading Mercury, Local Government Chronicle, Surrey Advertiser, Local Government Journal, Eccles Advertiser, Weekly Free Press and Aberdeen Herald, Mining Journal, Public Health Engineer, Glamorgan Free Press, Shrewsbury Advertiser, Leek Times, Loughborough Monitor, Pembroke Dock Gazette, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. J. Althaus, Lond.; A. Y. Z., Lond.; Anglo-Bavarian Brewery, Shepton Mallett; Messrs. C. Ash and Sons, Lond.; Apollinaris Co., Lond.; Mons. J. Astier, Paris; A Cambridge Undergraduate, Cambridge.

B.—Dr. B. W. Bond, Bister Algeria; Bradford Infirmary, Librarian of; Mr. M. Buchner, Lond.; Mr. G. Browning, Lond.; Messrs. Biondeau et Cie, Lond.; Messrs. J. B. Baillière et Fils, Paris; B. N., Manchester; Mrs. Blackmore, Lond.; Messrs. W. H. Bailey and Son, Lond.; *Bath Chronicle*, Manager of; Messrs. Battley and Watts, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. Buxey, Southampton; British Medical Benevolent Fund, Lond., Secretary of; Dr. F. W. Burton-Fanning, Norwich; Mr. F. S. Barnett, Lond.; Dr. G. Buchanan, Lond.; Surgeon-Major Baker, Dublin; Dr. C. Begg, Lond.; Mr. J. A. Belcher, Lond.; Dr. W. C. Bosanquet, Lond; Dr. T. C. Buck, Isle of Wight, Messrs. C. Barker and Sons, Lond.; Bradford Children's Hospital, Secretary of; Dr. Max Breitung, Coburg.

C.—Mr. W. F. Clay, Edinburgh; Crypto Works Co., Lond.; Mr. J. R. Cornish, Manchester; Chelsea Hospital for Women, Lond., Secretary of; Dr. W. Charnley, Shrewsbury; Messrs. Condy and Mitchell, Lond.; Mr. C. A. C. Colmer, Weymouth; Mr. J. B. Cameron, Lond.; Mr. G. W. Cazalet, Coventry; Christ's Hospital, Lond., Hon. Secretary of; Cornwall County Council, Chairman of; Dr. Collins, Lond.; Dr. A. Cox, Gateshead; Dr. C. Childs, Lond.

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F.—Mr. J. Fergusson, Broughty Ferry; Mr. G. B. Forge, South Woodford; First Swiss Alpine Milk Export Co., Lond.; F. V., Lond.

G.—Mr. R. Greene, Northampton; Mr. H. J. Gibbs, Singapore; Mr. W. H. Gilmour, Liverpool; Dr. W. T. Greene, Belvedere; Mr. W. G. Groves, Woodford; Grosvenor Club, Lond., Secretary of.

H.—Dr. T. Garrett Horder, Cardiff; Mr. F. F. Hartington, Brighton; Miss E. E. M. Hoyle, Ilkland; Mr. St. J. Hankin, Bedford Park; Hull Royal Infirmary, Secretary of; Mr. Victor Horsley, Lond; Mr. E. F. Harwood, Isleworth; Howard Association, Lond., Secretary of; Mr. J. Heywood, Manchester.

I.—Ickringill's Hygienic Cloth Syndicate, Keighley, Secretary of.

J.—Dr. C. H. L. Johnson, New Brunswick.

K.—Mr. H. Kimpton, Lond.; Dr. A. A. Kanthack, Cambridge; Mr. E. C. Keevil, Lond.; Mr. C. Kemp, Lond.

L.—Dr. J. F. Little, Lond; Mr. H. Lawrence, Lond., Mr. A. Lang, Lond.

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N.—Mr. H. Needes, Lond.; National Provident Institution, Lond., Secretary of; George Newnes, Ltd., Lond.; Dr. R. Neale, Lond.; Mr. W. J. Naismith, Ayr.

O.—Dr. H. O'Neall, Belfast; Messrs. Oppenheimer, Son, and Co., Lond; Omicron, Lond.

P.—Mr. G. Partington, Lond.; Prince of Wales's Hospital Fund, Lond., Hon. Secretaries of.

R.—Mr. J. D. Rawlings, Dorking; Royal Albert Hospital, Devonport, House Steward of; R. A. O., Lond.; Messrs. S. Rowbottom and Son, Alfreton; Russell, Lond.; Dr. G. A. Reid, Southsea; Rebman Publishing Co., Lond.; Royal Photographic Society, Lond., Secretary of; Royal Meteorological Society, Lond., Assistant Secretary of; Mr. G. D. Rowlands, New Amsterdam; British Guiana; Rotherham Hospital and Dispensary, Secretary of.

S.—Dr. R. Sisley, Lond; Dr. W. Shackleton, Liverpool; Statim; Lond.; Messrs. Sykes, Josephine, and Co., Lond.; Sanitary Wood Wool Co., Lond.; Sunderland and North Durham, Secretary of; Scientific Temperance Instruction, Boston, U.S.A., Superintendent of; Dr. Septimus Sunderland, Lond.; *Student*, Edinburgh, Editor of; Sanitary Institute, Lond., Secretary of; Messrs. Street and Co., Lond.; Mr. A. H. Safford, Lond.

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U.—University of Aberdeen, Court of; Urban District, Altrincham; Mr. J. R. Upton, Lond.

V.—Mr. E. Vitali, Lond.

W.—Mr. A. F. Walbrook, Bath; Dr. R. Wyse, Polmont Station; Messrs. Wilcox and Co., Lond.; Messrs. Widenmann, Broicher, and Co., Lond.; Wills, Ltd., Lond.; Dr. A. M. Weir, East Sheen; Dr. Forbes Winslow, Lond.; Mr. G. E. Williams, Rhostryfan; Messrs. Willing, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. H. Andrese, Lond.; A., Lond.; Messrs. Armour and Co., Lond.; Alma, Lond.; A. B., Lond.; Azygos, Lond.; Messrs. Allen and Hanburys, Lond.; Dr. L. N. Ashworth, Aramac, Queensland.

B.—Mr. W. E. Boulter, Woolwich; Mr. W. G. Burcombe, Lincoln; Sir W. Broadbent, Lond.; Mr. W. Bryce, Edinburgh; Mr. R. B. Settle; Mr. M. Bastable, Morecambe; Birmingham and Midland Hospital for Skin Diseases, Hon. Treasurer of; Beta, Lond.; Herren Boas and Hesse, Berlin; Borax, Lond.; Belvior, Lond.

C.—Mr. G. L. Cheatle, Lond.; Messrs. A. H. Cox and Co., Brighton; Messrs. T. Cook and Son, Lond.; Cyclops, Lond.; Clarendon, Lond.; Mr. T. C. Cartwright, Chester; College of Preceptors, Lond., Secretary of; Mr. D. Cooper, Huntingdon; Chocolat Menier, Lond.; Chemist, Lond.; Mr. F. W. Clarke, Manchester.

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H.—Mr. H. Hall, Lond; Mr. E. H. Hankin, Agra, India; Dr. V. D. Harris, Lond.; Mr. A. Hawkins, Crowthorne; Dr. P. H. Hensley, Jersey; Mr. C. W. Hemming, Abergwynfi; Mr. W. A. Higgs, Castle Combe; Mr. E. B. Hulbert, Windsor; Mr. J. Hawkes, Leamington Spa; Humerus, Lond.; Mr. H. W. Hancock; Dore; Huntingdon County Hospital, Secretary of; Dr. W. E. Home, Hong Kong; Dr. G. S. Hatton, Newcastle, Staffs; H. V., Lond.; Messrs. Hampton and Co., Lond.; Harvard Co. (of Canton, U.S.A.), Lond., Agent of; Dr. A. Harbinson, Elgin; High Shot Tower, Twickenham; Holland, Lond.

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L.—Dr. S. F. Long, Norwich; Mr. H. K. Lewis, Lond.; L., Neath.

M.—Dr. E. M. Madden, Bromley; Miss McLintock, Old Catton; M. O. H., Lond.; Mr. A. B. Mattinson, Edinburgh; Dr. L. Mansell, Ashtead; Mr. J. W. Moody, Crewe; M.D., London; M., Manchester; M.D., Liverpool; M.R.C.S., Ponder's End; Mr. A. F. Messiter, Epworth; Medius, Lond.; Medicus, Lond.; Mutual Life Insurance Co. of New York, Lond., General Manager of; Messrs. Miller and Hulbert, Windsor; Messrs. Maythorn and Son, Biggleswade; Dr. J. Macintyre, Glasgow.

N.—Mr. F. B. Nariman, Bombay; Northern, Loud.

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